CONSTRUCTION NEWS

Supplement to ENGINEERING NEWS. New York, March 18, 1909.

CONTENTS.

CONSTRUCTION NEWS:
Plans and Specifications on File.... 83
List of Contracts Pending 83
Railways 83
Electric Railways 84
Light and Power Plants 84
Bridges 85
Building 86
Water Supply and Irrigation 87
Sewerage 87
Streets and Roads 87
Manufacturing Plants 88
Miscellaneous Contracts 88
INDUSTRIAL NOTES 89
TRADE PUBLICATIONS 89
PROPOSALS 89, 90

CONSTRUCTION NEWS.

Plans and Specifications on File.

(denotes that this work is advertised in Engineering News.)*

The following plans (P.) and Specifications (S.) are on file and may be seen at office of The Engineering News Publishing Co., 220 Broadway, New York.

Bids close.	Work.	See issue.
3-20	Quay wall, Portsmouth, N.H.(S.)	2-25
3-20	Hospital, Annapolis, Md....(S.)	2-25
3-22*	Incineration plant, Easton, Pa.(S)	3- 4
3-22	Offal disposal (Garbage), Newton, Mass. .....(S.)	3-11
3-24	Lighting, North Chicago, Ill..(S)	3-11
3-26*	Pavement, Bridgeport, Conn. (S.)	3-11
3-27	Power machinery, New York.(S.)	3- 4
3-30*	Sewer, Watertown, N. Y..(S.)	3-11
3-31	Incineration plant, Milwaukee Wis. .....(S)	3-11
4- 3	Generating set, New Orleans, La. .....(S.)	3-18
4-17	Hospital, New York.....(S.)	3-18

List of Contracts Pending.

LIGHT, HEAT AND POWER PLANTS.

3-19 Lighting system, West Point, N. Y.
3-22 Elec supplies, Wash., D. C. .. 2- 4
3-22 Street lighting, etc., Wooster, Ohio 3-18
3-22 Electric equipment, New York.... 3-18
3-23 Ammeters, etc., Mare Island, Cal. 3-18
3-23* Lighting plant, etc., Prague, Okla 3-11
3-24 Lighting, North Chicago, Ill..... 3-11
3-24 Power house, etc., Kings Park, N. Y. 3- 4
3-24 Power-house, etc., Poughkeepsie, N. Y..... 3- 4
3-24 Lighting etc., Harrisburg, Pa.... 3-18
3-27 Power machinery, New York.... 3- 4
3-29 Elec. equipment, New York..... 3-18
3-30 Heating plants, Ft. McPherson, Ga. 3-11
4- 2 Transformers, Fort Riley, Kan.. 3-18
4- 3 Generating set, New Orleans, La. 3-18
4-13* Conduit, Sioux City, Iowa..... 3-18
4-13* Lighting, Portsmouth, Va. 3-11
4-15 Transformers, etc., Winnipeg, Man 3-11
4-15 Lamp standards, San Jose, Cal... 3-18

BRIDGES.

3-18 Bridge work, Dayton, Ohio..... 3-18
3-19 Bridges, Madison, Neb..... 3-11
3-20 Bridge work, Chicago, Ill..... 3-18
3-22 Bridge, Pottsville, Pa..... 3-11
3-24 Substructure, etc., Chicago, Ill... 3-18
3-25 Bridge, Trotwood, Ohio..... 3-11
3-25* Bridge, Camden, S. C..... 3- 4
3-27 Bridge work, Cleveland, Ohio... 3- 4
3-27 Bridge bonds, Crown Point, Ind. 3- 4
3-27 Bridges, Dakota City, Neb..... 3-18
3-29 Bridge approaches, Toledo, Ohio. 3-11
3-31 Bridge, Hamilton, Ohio..... 3-18
4- 1 Bridge approach, Westmoreland, Kan 3-11
4- 3 Bridge, Cleveland, Ohio..... 3-11
4- 5 Bridge, etc., Harrisonburg, La.. 2- 4
4- 5 Bridge, Watertown, Wis..... 3-18
4- 5 Bridges, Graham, N. C..... 3-18
4- 5 Culvert, Boston, Ohio..... 3-18
4- 6 Bridges, New Hampton, Iowa.... 3-18
4- 6 Bridge, Laporte, Ind..... 3-18
4- 6 Bridge, etc., Ellijay, Ga..... 3-18
4- 6 Bridges, Washington C. H., Ohio. 3-11
4- 7 Bridgework, Cleveland, Ohio.... 3-18
4- 8 Bridge, Winnipeg, Man..... 3-18
4- 8 Bridge, Manhattan, Kan. 3- 4

BUILDINGS.

3-13* Substructure, Evanston, Ill..... 3-18
3-20 Bricks, Edmonton, Alta..... 3- 4
3-20 School, Prince Albert, Sask..... 3-11
3-20 Hospital, Annapolis, Md..... 2-18
3-22 Post-office, Dixon, Ill..... 2-18
3-22 Heating, Los Angeles, Cal..... 3- 4
3-22 Building, Ft. Monroe, Va..... 3- 4
3-22 School, Wilkes-Barre, Pa..... 3- 4
3-22 Schools, New York, N. Y..... 3-18
3-22 Buildings, Toronto, Ont..... 3-18
3-23 Interior stone, Wash., D. C..... 3-18
3-24 Quarters, Ft. Mason, Cal..... 3-18
3-24 School, Baltimore, Md..... 3-18
3-24 Buildings, Burrwood, La..... 3- 4
3-25 Dwelling, Baltimore, Md..... 3- 4
3-25 Post-office, Boulder, Colo. 2-25
3-26 Vacuum system, Atlanta, Ga..... 3-11
3-26 Shop repairs, Fort Dade, Fla. (Mfg. Pl.) 3-11
3-29 Heating, etc., New York 3-18
3-30* Toilet rooms, etc., Burlington, Ia. 3-11
3-31 Post-office, Ruston, La. 3- 4
4- 1 Factory, Cleveland, Ohio (Mfg. Pl.) 3-11
4- 1 Library, Ferndale, Cal..... 3-11
4- 3* Assay bldg. foundation, New York. 3- 4
4- 5 Post-office, Dothan, Ala..... 3- 4
4- 5 Jail, Lebanon, Ind. 2-25
4- 6 School, Cincinnati, Ohio..... 3-11
4- 7 Post-office, Marion, Ohio 3- 4
4- 7 Barracks, etc., Omaha, Neb..... 3-18
4-12 Assay office (superstr.), New York 3-11
4-14 Post-office, Pittsburg, Pa..... 3-18
4-15* Post-office, Fayetteville, N. C.... 3-18
4-17 Hospital, New York..... 3-18
4-19 Post-office, Sumter, S. C..... 3-18
4-20* Post-office, Kearney, Neb..... 3-18
4-26 Buildings, North Chicago, Ill.... 3-11

WATER-WORKS.

3-19* Water extensions, Fort Andrews, Mass 2-25
3-19 Tower and tank, Jackson, Minn.. 3-18
3-20 Pump, Moncton, N. B..... 3-18
3-22 Water pipe, Edmonton, Alta..... 3-18
3-22 Pumping plant, etc., Yuba City, Cal. 3-18
3-22* Tunnel, New York..... 2-25
3-23 Water-works, Burlington, Ont... 3- 4
3-23* Water-works, etc., Prague, Okla. 3-11
3-23* Cast-iron pipe, Oak Park, Ill..... 3-11
3-23 Water-works, Barberton, Ohio... 3-18
3-23 Cast-iron pipe, Reading, Pa..... 3-18
3-25 Puddle trench, Ilion, N. Y..... 3-18
3-25* Water-works, Berlin, Md..... 3-11
3-25 Water-works, Stevensville, Mont. 2-25
3-29 Water-works, Oakland, Md..... 3-18
3-30 Tunnels, New York, N. Y..... 3-11
3-31* Water-works machinery, Lindsay, Okla 3-18
3-31 Cisterns, Fort Stevens, Ore..... 3-18
4- 1 Water-works, Litchfield, Neb..... 3-18
4- 1 Water-works, Elkton, Mich..... 3-18
4- 2 Pumping system, Platteville, Wis. 3-18
4- 2* Pumping system, Platteville, Wis 3-11
4- 5 Fire pumps, Jacksonville, Fla... 3-18
4- 5 Cast-iron pipe, Cheyenne, Wyo.. 3-11
4- 5* Water pipe, etc., Cheyenne, Wyo. 3-18
4- 6* Pumping engine, Jackson, Miss.. 3-11
4- 6* Aqueduct, New York..... 3-11
4- 6* Pumping engine, Greenville, Tex. 3-18
4- 6 Water meters, etc., New Orleans, La 3-18
4- 7 Water-works, Weyburn, Sask.... 3-11
4- 8 Pipe, Toledo, Ohio 3-18
4- 9 Cast-iron pipe, Richland Center, Wis 3-18
5- 5 Pumping machinery, Petaluma, Cal 2-11

SEWERS.

3-19* Sewer, Red Bank, N. J..... 3-11
3-19* Trunk sewer, Louisville, Ky..... 3- 4
3-19* Sewer extensions, Fort Banks, Mass 2-25
3-19 Sewer, Des Moines, Iowa..... 3-18
3-19 Sewers, Dayton, Ohio..... 3-18
3-20 Sewer bonds, Detroit, Mich..... 3-18
3-20 Terra-cotta pipe, Roanoke, Va... 3-11
3-22* Sewers, Williston, N. Dak..... 3-11
3-22 Sewer system, Wayne, Neb 2-18
3-22 Disposal tank, Marion, Kan..... 3-18
3-22 Sewerage system, Washington, Kan 3-18
3-23 Sewers, New York..... 3-18
3-24 Sewer pipe, Chicago, Ill..... 3-18
3-24 Disposal plant, Eaton, Ohio..... 3-18
3-25 Sewers, Fort Wayne, Ind..... 3-18
3-26 Sewers, St. Bernard, Ohio..... 3- 4
3-29 Sewer, etc., Angola, Ind..... 3- 4
3-30* Sewer, Watertown, N. Y..... 3-11
3-31 Sewers, Brooklyn, N. Y..... 3-18
4- 2* Purification plant, Millville, N.J. 2-25
4- 6 Sewer, Cedartown, Ga..... 3-18
4- 7* Sewers, Baltimore, Md..... 3-18
4- 7 Sewers, Birmingham, Ala..... 3- 4

STREETS AND ROADS.

3-19* Grading, etc., Kingston, N. Y... 3- 4
3-19 Road, Tipton, Ind..... 3- 4
3-20 Road impvt., Cleveland, Ohio.... 2-18
3-20 Road impvt., Youngstown, Ohio.. 3-18
3-22 Excavation, etc., Los Angeles, Cal. 3-18
3-22 Grading, etc., Jefferson, Ohio..... 3-18
3-22 Grading, etc., Etna, Pa..... 3-18
3-22 Paving, Paris, Tex..... 3-11
3-22 Pavement, Mason, Mich..... 3-11
3-22 Street impvt., Ravenna, Ohio.... 3-11
3-22 Macadam, Ashtabula, Ohio..... 3- 4
3-23 Sidewalks, etc., Fort Q. A. Russell, Wyo 3- 4
3-23* Road-roller, Portsmouth, Va.... 3-18
3-23 Ballast and screenings, Pittsburg, Pa 3-18
3-25 Sidewalks, Wahpeton, N. Dak.... 3-11
3-25 Grading, etc., Philippi, W. Va.. 3-18
3-26* Pavement, Bridgeport, Conn..... 3-11
3-26 Road impvt., Cincinnati, Ohio... 3-11
3-26 Road impvt., St. Bernard, Ohio.. 3- 4
3-29 Grading, etc., Bowling Green, Ohio 3-11
3-29 Stone road repair, Toledo, Ohio.. 3-18
3-30 Grading, etc., Rockville, Md..... 3-18
3-30* Roadway, East Liverpool, Ohio.. 3-11
3-30* Pavement, Watertown, N. Y..... 3- 4
3-31* Paving, Springfield, Ohio..... 3-11
3-31 Roads, Ottawa, Ohio 3-18
4- 2 Paving, Little Falls, N. Y..... 3-18
4- 5 Grading, etc., Bowling Green, Ohio 3-18
4- 5 Grading, Lafayette, Ala..... 3-18
4- 5* Paving, Newburgh, N. Y..... 3-18
4- 5* Macadam, etc., Graham, N. C.... 3-11
4- 5 Roads, Danville, Ind..... 3-11
4- 6 Grading, etc., Berea, Ohio..... 3-11
4- 5* Paving, Frederick, Md. 3-18
4- 6 Road, Crawfordsville, Ind..... 3-11
4- 6 Road, Vincennes, Ind..... 3-11
4- 7 Road, Kokomo, Ind..... 3-18
4- 8 Road, Logansport, Ind..... 3-11
4-12* Macadam, Decatur, Ala..... 3-18

MISCELLANEOUS.

3-19 Ditch, Vandalia, Ill..... 3-11
3-20 Quay wall, Portsmouth, N. H.. 2-25
3-22 Incineration (Garbage) plant, Easton, Pa. 3- 4
3-22 Signal system, Vancouver, B. C.. 3-11
3-22 Offal disposal (Garbage), Newton, Mass 3-11
3-23 Ditch, Bluffton, Ind..... 3-11
3-23 Canal protection, St. Catharines, Ont 3-18
3-24* Lock machinery, Wheeling, W.Va. 2-25
3-26* Creek impvt., Wilmington, Del.. 3- 4
3-26* Rock removal, New York..... 3- 4
3-26* Steel, Sault Ste. Marie, Mich.... 3-11
3-26* Vacuum cleaning system, Atlanta, Ga 3-11
3-26* Dredging, Geneseo, Ill..... 3-18
3-27 Monuments, Terre Haute, Ind... 3- 4
3-29 Wireless station, Ft. Riley, Kan.. 3-11
3-29 Dredging, Torento, Ont 3-18
3-29 Canal supplies, Montreal, Que... 3-18
3-29 Timber, Fort William, Ont..... 3-18
3-30* Dam, Sault Ste Marie, Mich... 3- 4
3-30 Light-house, etc., Cleveland, O.. 3- 4
3-30 Wire fence, Ft. Moultrie, S. C... 3-11
3-30* Tunnel, Boston, Mass..... 3-11
3-31 Timber, Ottawa, Ont..... 3-11
3-31 Riprap, etc., Wash., D. C..... 3-11
3-31 Incineration plant, Milwaukee, Wis. (Garbage) 3-11
3-31 Barge canal, Albany, N. Y..... 3-11
3-31 Retaining wall, Columbus, Ohio.. 3-18
4- 1* Ditch, Jeddo, Pa..... 3-18
4- 2 Light vessel, Wash., D. C. 3- 4
4- 3 Walls, gates, Knoxville, Tenn. 3-11
4- 5* Light-house, Wilmington, Del.... 3-11
4- 5* Dump scow, Providence, R. I.... 3-18
4- 6 Wharf, Beaumont, Tex..... 3-18
4- 6* Grade crossings, Phila. & Reading (Rys.) 3-18
4- 7* Light-house foundation, Wilmington, Del. 3-11
4-10 Buoy service, Mobile, Ala..... 3-18
4-12* Lock gates, etc., Wash. D. C.... 3-18
4-14* Pier repair, Manistee, Mich..... 3-18
4-14* Fence, Hull, Mass..... 4-14
4-15* Breakwater, Buffalo, N. Y..... 3-18
4-16 Cement, Brandon, Man 3-18
4-17* Lumber, Nashville, Tenn..... 3-18
4-19* Lock gates, Nashville, Tenn.... 3-18

EXAMINATIONS.

3-23 City Engr., Saskatoon, Sask..... 3- 4
3-24 Asst. Chemist, Wash., D. C..... 2-25
3-27 Asst. Steam Engr., Albany, N. Y. 3-11
3-27 Chief Engr., White Plains, N. Y. 3-11
3-27 Elec. Meter Insp., Albany, N. Y.. 3-11
3-27 Highway Insp., Albany, N. Y.... 3-11
3-30 Asst. Curator, Wash., D. C. 3- 4
3-30 Laboratory Aid, Wash., D. C.... 3- 4

FOREIGN.

4-15 Steel rails, Siam 2-25
4-15* Motor hose wagon, China..... 2-25
4-24 Railway supplies, Chile 2-25

RAILWAYS.

(denotes that this work is advertised in Engineering News.)*

ABERDEEN & ASHBORO.—Company contemplates building from some point in Montgomery County to Rockingham, N. C., or through Rockingham to some other point in Richmond Couny. Henry A. Page, Aberdeen, N. C., is Pres.

CANADIAN PACIFIC.—The following program of construction is announced by the company to be started in April: Completion of the double-tracking of the main line between Winnipeg, Man., and Fort William, Ont., 18 miles; extension of Tuelon branch to Icelandic River, 26.5 miles; track-laying on the Mowbray branch, 6.5 miles; Virden branch, tracking, ten miles; Pheasant Hills branch extension, 33.01 miles; extension of the Lacombe branch east, 35 miles; Weyburn, Sask., westerly, 20 miles; from Cheadle on the Calgary section of the main line, 40 miles north; from Kipp, Alta., north, 28.5 miles. G. J. Bury, Winnipeg, is Gen. Mgr., Lines West.

CENTRAL OF GEORGIA.—Company plans, according to press reports, a trunk line from the east to the southwest, by the extension of its line, about 250 miles, from Andalusia, Ala., to the Illinois Central above New Orleans; the extension of the Florida line to Pensacola, Fla.; the extension of the Alexander City (Ala.) line to Union City and an alliance with the Seaboard Air Line. The company also will extend its line from Florala to Pensacola, Fla., and from Andalusia to Florala, and another line will be built from Alexander City to Union City. C. K. Lawrence, Savannah, Ga., Ch. Engr.

CUMBERLAND R. R.—Surveys have been started for the northern extension of the line from Barboursville to Beattyville, Ky., 70 miles. J. H. Graham of Knoxville, Tenn., is Engr.-in-Charge. B. C. Milner is Ch. Engr., Warren, Ky.

DE QUEEN & EASTERN.—An extension will be built soon from De Queen, Ark., westward. M. F. Allen, De Queen, is Gen. Supt.

GAINESVILLE MIDLAND.—It is planned to widen the gage of this road between Belmont and Monroe, Ga. Estimates for the work have been prepared. E. L. Douglas, Gainesville, Ga., Gen. Mgr.

HOLSTON RIVER R. R.—The contract for the construction has been awarded to LANE BROS., of Charlottesville, Va., and J. B. JONES, of Baltimore, Md. Under the terms of the contract the road is to be completed and ready for operation between Persia, Tenn., the Southern's terminus, and Moccasin Gap, Va., where it connects with the Virginia & South-Western. The road was begun by the V. & S. W. before it was acquired by the Southern, but the project was temporarily abandoned in December, 1907.

LAKE ARTHUR, JENNINGS & NORTHERN.—Charter has been filed at Lake Charles, La., to build from Lake Charles via Jennings, to connect with the Colorado Southern, New Orleans & Pacific. W. D. Conover of Lake Arthur, La., is Pres. The line will be about 50 miles long. Headquarters at Jennings, La. Capital, $1,000,000.

MARSHALL & EAST TEXAS.—Contract has been let to extend the line twelve miles south from Marshall, Tex., to JOHN SCOTT & SONS, Times Bldg., St. Louis, Mo. R. J. Lockwood is Res. Engr.; J. E. Votaw, Gen. Supt., will have charge of construction. It is intended to continue the extension to a point 35 or 40 miles from Marshall. A. T. Perkins of St. Louis is Pres. KAISER & MALONEY have a sub-contract.

NORFOLK & SOUTHERN.—Receivers' certificates for $1,000,000, which have been authorized, will be used for various work, including freight terminals at Norfolk, remodeling and enlarging freight yards at Berkley, Va., and Newbern, N. C., the construction of additional sidings and spurs and building eleven miles of line between Pinetown and Bishop Crossing, N. C., on which latter grading is nearly completed and track laying is in progress. F. L. Nicholson is Engr. Maintenance of Way, Norfolk, Va. Noted on Nov. 5.

OCEAN SHORE.—About 52 miles of the main line from San Francisco, Cal., south to Santa Cruz, which is to be 78 miles long, is in operation from San Francisco south to Long Bridge, and from Santa Cruz north to Scott Creek, leaving about 26 miles on which grading is under way. This work is under contract to LILLY & HEINS, and the HUMBOLDT CONTRACTING CO., of Santa Cruz; GRAHAM-NICHOLSON CONTRACTING & ENGINEERING CO., of San Francisco, and the RANSOME-CRUMMEY CO., of Oakland. About eight miles is heavy bluff work, running about 200,000 cu. yds. a mile, and the balance is across open country where work will average about 20,000 cu. yds. a mile. The company has in operation 2¼ miles of branch line and 6½ miles of commercial sidings. Nothing further has been done since surveys were made for the proposed branch to be built under the name of the Ocean Shore & Eastern from Santa Cruz, southeast to Watsonville, 19 miles, and from that place under the name of the San Juan Pacific to Hollister, 25 miles. Part of the latter is in operation. Surveys were made also for an additional 200 miles to be built under the name of the San Joaquin Valley from Hollister to Coalinga. J. D. Harvey, San Francisco, is Pres. and Gen. Mgr.; J. B. Rogers is Ch. Engr.

OKLAHOMA & GOLDEN CITY.—Company will build this year a standard-gage railroad from Pawhuska, Okla., to Jefferson City, Mo., with a branch from Climax Springs to Springfield, Mo., according to the "Manufacturers' Record." Main line will be about 270 miles and branch 70 miles long. Principal towns to be connected are Pawhuska, Bartlesville and Miami, Okla.; Joplin, Carthage, Golden City, Stockton, Humansville, Preston, Climax Springs, Brazito and Jefferson City, Mo. An issue of 50-year 5% bonds has been authorized, and the company is arranging to float them. Survey is to be resumed immediately and construction contracts to be let in April. E. M. Dempsey is Pres., Pawhuska, Okla.; John A. Wimberly, of Pawhusga and L. C. Lohman of Jefferson City, Mo., Vice-Pres.; W. H. Reed, Secy.; W. P. Burns, Treas., and John A. Griesel, Gen. Mgr., all of Golden City, Mo.

PENNSYLVANIA R. R.—Contracts were awarded on March 8 for the last portion of the elevated line which will eliminate 33 grade crossings in Trenton Ave., Pittsburg, on the Philadelphia Division. The AMERICAN BRIDGE CO., of Pittsburg, will furnish all the steel required in the construction of the line and the material will be turned out of the plant at Ambridge, Pa. Contracts for the construction of the line were awarded to the JAMES McGRAW CONSTRUCTION CO., Arcade Bldg., Philadelphia. Definite action has not been taken as yet regarding the 28th St. grade crossing in Penn Ave. Alexander C. Shand, Philadelphia, is Ch. Engr.

*PHILADELPHIA & READING.—Bids are asked by W. Hunter, Ch. Engr., 520 Reading Terminal, Philadelphia, Pa., until noon, on April 6, for construction of the work appurtenant to the abolishment of grade crossings on the P. G. & N. R. R. as follows: Contract No. 20, materials for permanent tracks, Berks St. to Broad St.; Contract No. 36, fences, gates, etc., York St. and Norris St. yards; raising Huntington St. foot-bridge, etc.

SOUTHERN R. R.—See item under Holston River R. R.

VIRGINIAN RY.—Track-laying probably will commence on the Winding Gulf branch about April 1. It is expected to have the entire branch to Pemberton, Va., completed by November.

ELECTRIC RAILWAYS.

NEW YORK, N. Y.—The Public Service Commission has approved a franchise given to the Bronx Traction Co. by the Board of Estimate, allowing the construction of 12,000 ft. of double track road down Classon Point Road from Westchester Ave. to a point across and east of the Bronx River. The Bronx Traction Co. is a subsidiary of the Union Railway Co. and the application was made by Frederick W. Whitridge, Receiver of the latter company.

WASHINGTON, PA.—The Wheeling & Elm Grove Ry. Co. will extend its trolley line from the present terminus, at West Alexander to Claysville. The Wheeling road and the Pittsburg Railways Co., which has completed its line from Pittsburg to Washing-

ton, are said to have entered into an agreement whereby the latter concern will extend its line to Claysville to connect with the West Virginia system. John Murphy is Gen. Supt. and F. Uhlenhaut, Jr., is Ch. Engr. of the Pittsburg Rys. Co., 435 Sixth Ave., Pittsburg.

PITTSBURG, PA.—Local press reports state that the Pittsburg, Morgantown & Grafton Ry. Co. intends to construct an electric railway from Fairmont, W. Va., via Morgantown, Point Marion, Smithfield, Fairchance and terminating at Uniontown, with a branch or line running from Morgantown through Mount Morris, Waynesburg and terminating at Washington, Pa., with an additional branch running from Waynesburg via Rice's Landing, Millsboro, Brownsville, California and terminating at Allenport, in Washington County, making a total length of about 140 miles. The company probably will construct a local line in Grafton, W. Va., about five miles long, which will be the key for the future extension from Fairmont via Grafton to Clarksburg. At Fairmont the railway will connect with the Fairmont & Clarksburg Traction Co.'s line south to Clarksburg, a distance of 33 miles. At Washington the new line will connect with the Wheeling & Elm Grove R. R. Co.'s line, now building from Wheeling. At Allenport, Pa., the Pittsburg & West Virginia Railways Co.'s line will connect with the Pittsburg Rys. Co.'s Charleroi line, giving an outlet to Pittsburg down the Monongahela Valley. It is stated that within 30 days the company will begin surveying the route. W. E. Hildebrand, Pittsburg, is the promoter of the project. James Bryan, Park Bldg., is Engr.-in-Charge, Pittsburg. Among those interested are: J. C. Sturgess, David Elkins, E. M. Grant and J. L. Lyons, Dawnesburg. The Pittsburg & West Virginia Ry. Co.

FORT PAYNE, ALA.—H. T. Henderson, of Durango, Colo., Pres. of the Alabama Railway & Power Co., has announced that the projected electric railway from Birmingham to Chattanooga is not completed at present, although a hydro-electric plant is proposed. Other officers of the company are J. H. Hill, of Fort Payne, Ala., Vice-Pres., and C. L. Young, Jr., of Durango, Colo., Secy. and Treas.

TOLEDO, OHIO.—The Toledo & Columbus Ry. Co. has secured the right-of-way and is planning to begin the construction of its proposed electric railway this season, it is reported. The railway will extend from Fremont to Tiffin and Bucyrus. It is planned to connect at the northern end with the Lake Shore Electric Ry., for Toledo, and at the southern end with the Columbus, Delaware & Marion Ry., for Columbus. D. H. James is Pres.; Mark Winchester, Secy.; H. R. Klauser, Treas., all of Toledo.

GRAND RAPIDS, MICH.—A contract will be let at once for the construction of the southeastern division of the Grand Rapids Electric Ry. This section of the railway will extend from Kalamazoo to Battle Creek, Burlington, Coldwater and Camden, across the State line and into Ohio. Another branch of the system will be built from Grand Rapids to Greenville, Edmore and Mount Pleasant. Construction is to be started on both of these branches early this spring. C. J. Post is Secy.

EAU CLAIRE, WIS.—A 3-mile extension and one-half a mile of double track will be constructed soon by the Chippawa Valley Ry., Light & Power Co. The company is in the market for 70-lb. T-rails. George B. Wheeler, Eau Claire, is Gen. Mgr.

SIOUX CITY, IOWA.—Franchises have been granted by the towns of Le Mars, Paullina, Primghar, Hartley and Spirit Lake, all in Iowa, to the Sioux City & Spirit Lake Ry. Co. It is expected to begin work early this spring and to finish the entire line this year. The projected route is from Sioux City, Iowa, northeast to Spirit Lake, 108 miles. The maximum grade will be less than 1%, with 3 degs. curvature outside of the towns. Contract has been let to WESTINGHOUSE, CHURCH, KERR & CO., 10 Bridge St., New York, to build the line. F. Patch, Pres., and L. F. Wakefield, Ch. Engr., 209 American Block, Sioux City. Noted on Oct. 22, Dec. 10, 1908, and March 4, 1909.

ENID, OKLA.—Construction of an extension of the Enid City Ry. on South Grand Ave. is to be started in about a month. About 2,400 ft. of track will be laid. Clarence Kline is Gen. Supt.

SAPULPA, OKLA.—The Sapulpa & Interurban Ry. Co. proposes to build a line from Sapulpa, Okla., southeast via Kiefer to Glenpool, on the Midland Valley R. R., ten miles. Five miles additional will be built at and near Sapulpa, also a 3-mile line north to oil fields at Tanneha. Contracts are to be let for grading and bridging. The company will erect the overhead work with its own forces. H. E. Clark is Pres., Glen Campbell, Pa., B. B. Burnett, Vice-Pres., Sapulpa; D. W. Patton, Ch. Engr., Sapulpa; H. H. McFann is Gen. Mgr.

MONTREAL, QUE.—Active operations will be started soon on the Montreal & Southern Counties Ry. E. A. Mumford, Secy.-Treas. of the Montreal & St. Lambert Terminals Development Co., has announced that the STANSTEAD GRANITS CO. has been let a contract for 155,000 granite blocks, the same to be used for paving the roadway between the company's rails along Common, Grey Nun and Youville Sts. Bids are being invited for laying these blocks, operations to be commenced as soon as the weather will permit during the coming spring. The Montreal & Southern Counties Ry., Mr. Mumford states, will award contracts soon for all the electrical apparatus necessary for an electrical tramway company, which is to be put into operation between McGill St. and the several communities on the South Shore. The tubular steel poles required for this electrical installation have been purchased, together with all the necessary appliances on the bridge and elsewhere. It is reported that the company will utilize the south roadway on the Victoria Jubilee Bridge for laying its track. It is possible that this roadway may be widened in the future, so as to permit of a double track, but the requirements of the coming season will be met by laying a single track, supplemented for traffic purposes by two switches, until the company's system is extended to Longueuil, Chambly and other points embraced in the plan of construction. It is announced that operations will be begun on the company's sub-station and car barns at St. Lambert, Que., soon.

PORT ARTHUR, ONT.—The Railway Commissioners will receive bids for rails, ties and other construction material required to complete the double-track of the Port Arthur & Fort William Electric Railway to the Fort William boundary. About 20 miles of new track will be added to the railway during 1909. N. C. Pilcher, Port Arthur, is Gen. Mgr.

BRANTFORD, ONT.—The Brantford Street Ry. Co. has deposited certain bonds with the city as evidence of good faith that it will fulfil its obligations. These consist of rebuilding the existing eight miles of street railway within one year from May 1 and making eight miles additional extensions in the city within two years. M. A. Verner, Brantford, is Gen. Mgr.

LIGHT AND POWER PLANTS.

BANGOR, ME.—Plans have been under consideration by the Bangor Railway & Electric Co. for building a new dam during the coming summer to take the place of the old wooden dam that is now doing service at the power station in Veazie. The new dam will be of concrete and will cost between $75,000 and $100,000. Preliminary surveys, soundings, boring, etc., have been made at the site of the new dam, which is to be about 1,000 ft. down the river. By moving the dam down the river from the site of the present one the falls just below the old dam will be taken in and something added to the head of water which will be obtained. John R. Graham, Baugor, is Pres. and Gen. Mgr.

WAREHAM, MASS.—The Plymouth County Commissioners have received a petition from the Agawam Reservoir Power & Irrigation Co. of Wareham for the right to build a dam in the Agawam River at Wareham, a short distance north of old Iron Works pond. The company proposes to build a dam nearly a quarter of a mile long and 25 ft. high to flow 700 acres of land and by means of chutes to irrigate a large area for cranberry bog purposes and to furnish power for those who may wish it.

SCHENECTADY, N. Y.—E. F. Peck, Gen. Mgr., Schenectady Ry. Co., states that the company will build a sub-station at the north end of Ballston Lake on its Saratoga division with a capacity of 1,800 KW. It will be equipped with two 600-KW. rotary converters and two 300-KW. rotary converters and the current will be transmitted to the station at 2,300 volts a. c. and reduced to 600 volts d. c. The building will be of brick, with stone trimmings, and will have concrete floors and a fireproof roof. Estimated cost, $17,500.

NEW YORK, N. Y.—Bids are asked by C. B. J. Snyder, Supt. of Bldgs., Dept. of Education, until 3 p. m., March 22, for alterations and additions to electric equipment in Public School No. 8, on Mosholu Parkway, between Briggs and Bainbridge Aves., Bedford Park, Borough of the Bronx.

NEW YORK, N. Y.—Bids are asked until 3 p. m., March 29, by C. B. J. Snyder, Supt. School Bldgs., Dept. of Education, for installing electric equipment in new Public School No. 162, on the northerly side of St. Nicholas Ave., between Willoughby Ave. and Suydam St., Boro. of Brooklyn.

Bids were received as follows on March 15 by C. B. J. Snyder, Supt. School Bldgs., Dept. of Education, for installing electric equipment in new Public School No. 163, on the southerly side of Benson Ave., between Bay 14th St. and 17th Ave., Boro. of Brooklyn: T. Frederick Jackson, $6,675; Cowden & DeYoung, $6,691; Pete & Powers, $6,886; Commercial Construction Co., $6,6[illegible]; E. J. Duggan, $7,110; Griffin & Co., $7,[illegible]; Craig & Ross, $7,045; Rein & O'Donowan, $7,480.

Also for installing electric equipment in new Public School No. 160, on the southerly side of Fort Hamilton Ave., between 51st and 52d Sts., Boro. of Brooklyn: T. Frederick Jackson, $6,466; Cowden & Young, $6,651; Pete & Powers, $6,826; Commercial Construction Co., $6,575; E. J. Duggan, $[illegible],280; Griffin & Co., $7,313; Craig A. Ross, $6,982; Rein & O'Donowan, $7,490; Irving I. Bogan, $7,960.

VINELAND, N. J.—A company has been formed here, with a capital of $100,000, to develop water power on the Maurice River. The name adopted is the Maurice River Light, Heat & Power Co. and the promoters are E. C. Potter, of this town, Vice-Pres.; E. W. Maloney, of Avondale, Pa., Pres.; B. F. Groff, Hydraulic Engr., of Lancaster, Pa.; C. W. Shoemaker, of Bridgeton, Treas., and Marcus Fry, of this town, Secy. Over 1,200 acres of land has been purchased on which will be a lake of ten acres. A dam half a mile long is to be constructed immediately north of Landis Ave., which will furnish 16 ft. of waterfall.

HARRISBURG, PA.—Bids are asked until 4 p. m., March 24, by Charles A. Miller, City Clerk, for electric street and highway lighting in this city for periods of one, two, three and five years, commencing June 1, 1909. All streets and highways must be lighted with electric arc lamps of 2,000 c.p., or with incandescent lamps of 100 or 50 c.p. These lamps must be lighted every night during the entire year or term of contract. Bids must state the amount to be charged per lamp, and the successful bidder must furnish free one 2,000 c.p. light for every 40 such lights furnished under the terms of the contract.

Also bids are asked as above for furnishing electric current for the operation of the police patrol and fire alarm systems for one, two, three and five years commencing June 1, 1909.

PHILADELPHIA, PA.—We are officially informed that the request of the merchants for more electric lights along Market, Broad and Walnut Sts. has been referred by John E. Reyburn, Mayor, with a recommendation to the City Councils.

CHESTER, PA.—The Beacon Light Co., it is stated, will soon commence work on improvements to its plant, to cost about $125,000. It is proposed to enlarge the power house and install direct-connected machinery, doing away with all belt-driven machinery.

ROANOKE, VA.—The Craig Water-Power Co., A. L. Sibert, Pres., is having plans prepared by C. S. Wenger, Consult. Hydraulic Engr., Brownstown, Pa., for electric-power plants to develop water-power of Meadow and John's creeks. The plant at the former place will have capacity of 25,000 HP. under 800-ft. head; equipment will consist of two impulse water-wheel driven units, direct connected, of 700 KW. each. The installation on John's Creek will be made later, and will develop same horsepower under 225-ft. head. Equipment probably will be duplicate of first; Mr. Wenger probably will purchase machinery. The company is capitalized at $200,000. The main office of the company is in Richmond, Va. A. L. Sibert is Pres.

MARTINSBURG, W. VA.—The Interstate Natural Gas. Co., a corporation organized under the laws of West Virginia, has filed with the City Council its application for a franchise to construct and operate gas mains and pipes in the streets and alleys of the city, for the purpose of transporting and distributing gas for lighting, heating and other purposes. The notice states that the company will ask the Council to act upon the matter on March 18. The application was filed by Faulkner, Walker & Woods, Attorneys. It is stated that the Interstate Natural Gas Co. is constructing a pipe line from the gas fields of West Virginia to Baltimore and Washington, and that the mains will run to Cumberland, Hagerstown, Frederick and other points in Maryland. It is said that the right-of-way into Baltimore has been secured, and that the pipe line will cross the Potomac River in a few months. It is expected that the smaller cities will be supplied by branch pipe lines, the main line running in an almost direct line from the fields to the larger cities. Whether it will cross the river above or below Martinsburg is not definitely decided.

HAWKINSVILLE, GA.—It is stated that W. O. Jelks, of Hawkinsville, and G. E. Clower, of Auburn, both connected with the University of Alabama at Tuscaloosa, Ala., have been engaged to prepare plans and specifications for a municipal electric light plant, for which $15,000 has been appropriated. C. W. Harris is City Clerk.

MOUNT OLIVE, MISS.—Huston & Cunningham, Engineers, 725 Maison Blanche Bldg., New Orleans, La., are preparing plans and specifications for an electric-light plant to be erected in Mount Olive. Estimated cost, $7,500. Bids are to be opened in about six weeks.

SHREVEPORT, LA.—Harry B. Hawes, Third National Bank Bldg., St. Louis, Mo., it is stated, has formed a syndicate to control the greater portion of the gas fields in Caddo Parish, near Shreveport, and one of the early projects will be to build a pipe line from the field to New Orleans, a distance of 300 miles. Among those associated with Mr. Hawes are Philip Werlein, Louis Price and F. W. Bouden, of New Orleans; E. H. Everette, of Washington, and G. H. Walker and Lewis B. Ely, of St. Louis. They have control of 150,000 acres of gas-producing land in the Caddo field and have two producing wells, which emit 50,000,000 ft. of gas per day. The gas pressure in Caddo is terrific and is found in three separate and distinct stratas. One stratum is at 1,000 ft., one at 1,600 ft., and the third at 2,200 ft. It is reported that the company will maintain its head offices in Shreveport.

NEW ORLEANS, LA.—Bids are asked until 11 a. m., April 3, by R. C. Hollyday, Ch. of Bureau of Yards and Docks, Navy Dept., Washington, D. C., for installing a 50-KW. engine-driven generatnig set and accessories at the U. S. Naval Station, New Orleans. Specifications are on file at the office of Engineering News, New York.

WOOSTER, OHIO.—Bids will be received by the Board of Public Works until March 22 for lighting the streets, alleys, etc., in the city for a term of ten years. C. W. Van Ness is Clk.

ELKHART, IND.—The Elkhart Gas Co. has let a contract to the PARKER-RUSSELL MINING & MFG. CO. for the rebuilding of the company's retorts and otherwise improving the plant.

DES MOINES, IOWA.—The Board of Supervisors has awarded contract for the installation of an electric light and power plant for the Polk County court house and jail to the ERIE CITY IRON WORKS, Erie, Pa., at $10,750. Harry B. Frase is City Audr.

*SIOUX CITY, IOWA.—Bids will be received by A. A. Smith, City Clk., until 7.30 p. m., April 13, for furnishing all material and labor necessary for constructing a reinforced concrete diverting conduit, 8 x 10 ft. in size and about 2,600 ft. in length, for Bacon Creek, with all accessories, in accordance with plans and specifications for said work prepared by G. Y. Skeels, City Engr., and filed with the City Clerk.

MINNEAPOLIS, MINN. — The Sageng Threshing Machine Co., Minneapolis, Minn., will soon purchase equipment for its new plant, a portion of which will be electric motor-driven. The company will purchase equipment for its power plant as follows: One 300-HP. engine, new or second-hand, with condenser and heater complete, one 300-HP. Babcock & Wilcox boiler, 150-lb. pressure, with pump and injector; one 150-KW., 2-phase, 60-cycle, 2,200-volt, 600 r.p.m. Westinghouse generator, complete with sliding rail, pulley excite[illegible] complete. The company [illegible] ised a few months ago [illegible] old street railway plant, [illegible] Paul and Minneapolis, [illegible] Transfer R. R., which w[illegible] equipped at a cost of a[illegible]

DULUTH, MINN.—The [illegible] Board has awarded a co[illegible] acting triplex pump and [illegible] ances for the new statio[illegible] ter system at 15th Ave. [illegible] the GENERAL ELECTR[illegible] tady, N. Y., at $6,400.

FORT RILEY, KAN.—[illegible] will be received until 10 [illegible] Capt. W. M. Whitman, C[illegible] U. S. A., for extensions [illegible] including five transformer[illegible]

WHARTON, TEX.—At a [illegible] City Council a 52-year fr[illegible] ed to J. J. Wensley for [illegible] electric light plant, etc. [illegible] Wharton. Mr. Wensley is [illegible] & Cold Storage Co.

EL PASO, TEX.—The [illegible] El Paso Interurban Ry. [illegible] build an electric railway [illegible] to El Paso, is in the mark[illegible] power station equipment [illegible] will be awarded through [illegible] Michigan Ave., Chicago, [illegible] Baum, El Paso.

AGNEW, CAL.—Contra[illegible] awarded by the Board of [illegible] Agnew State Hospital for b[illegible] plant equipment, etc., as f[illegible] gine to the ENGINEER[illegible] AGENCY CO., at $6,750; boil[illegible] DON IRON WORKS, at $2[illegible] Generators, to BARRETT, FO[illegible] ING, at $5,150. Bids will b[illegible] construction of underground [illegible] the hospitals.

MARE ISLAND, CAL.—Bids will be received at the Bureau of Supplies and Accounts, Navy Department, Washington, D. C., until March 23 to furnish at the navy yard, Mare Island Cal., ammeters and voltmeters, as per Schedule 1995. Blank proposals will be furnished upon application to the navy pay office, San Francisco, or to the Bureau of Supplies and Accounts. E. B. Rogers is Paymaster-Gen., U. S. N.

SAN JOSE, CAL.—Bids are asked by James Knox Taylor, Supervy. Arch., Treasury Dept., Washington, D. C., until 3 p. m., April 15, for lamp standards, etc. (complete in place), at U. S. post-office here.

LOS ANGELES, CAL.—The Board of Supervisors has awarded contract for the electrical and telephone work, in connection with the proposed new Hall of Records and County Office Building, to WOODHILL & HULSE ELECTRICAL CO., of Los Angeles, at $15,850.

ORANGEVILLE, ONT.—We are officially advised that Smith, Kerry & Chace, Confederation Life Bldg., Toronto, will soon ask for bids for the construction of the powerhouse for the Dufferin Light & Power Co. of Orangeville. The power-house will contain three 150-KW. hydraulic units with step-up transformers to a transmission voltage of 22,000 volts.

TORONTO, ONT.—We are officially advised that the city of Toronto has issued specifications covering underground cable to the value of about $40,000. Bids will be asked before the end of March. Address Electrical Department, City Hall, Toronto.

WINNIPEG, MAN.—The city has let a contract for the construction of the transmission line from the Point du Bois power development to the WILLIAMSON CONSTRUCTION CO., Toronto, Ont., at $18,424, and for the telephone line to R. & B. McLEOD, at $23,421. The city has decided to build these lines by day labor, but it has recently transpired that the building for the high-pressure-water system cost approximately $100,000 more by day labor than the lowest tender.

VERNON, B. C.—Water in this vicinity will be used to develop electrical power for the purpose of running an electric car system and distribute light and power throughout the surrounding country. J. C. Kennedy, Stav Lake Power Co., Vancouver, B. C., is interested.

BRIDGES.

(* *denotes that this work is advertised in Engineering News.*)

SOUTHBRIDGE, MASS.—The citizens on March 8 voted in favor of raising $8,000 for the construction of a stone arch bridge over the Quinebaug River at Globe Village. William W. Buckley is Town Clk.

LOCKPORT, N. Y.—The city will erect a steel bridge over Eighteen-Mile Creek at Clinton St. Plans and specifications are being prepared by Julius F. Frehsee, City Engr.

SENECA FALLS, N. Y.—The State Engineer, Albany, is preparing plans for a plate girder bridge, 60 ft. long, 31-ft. roadway, with two walks each 5 ft. wide, to be constructed at Ovid St., Seneca Falls. F. C. Stevens is State Supt. Pub. Wks., Albany.

SHARPSVILLE, PA.—The Shenango Furnace Co. has awarded to the BROWN HOISTING MACHINE CO., of Cleveland, Ohio, contract for constructing an ore bridge at their works in Sharpsville. Estimated cost, $150,000.

GRAHAM, N. C.—Bids are asked by Alamance County until April 5 for constructing 14 short-span bridges. Gilbert C. White is Engr., Durham, N. C.

FLORENCE, S. C.—The contract for putting in the concrete piers and steel girders in the Atlantic Coast Line's trestle across the Great Pee-Dee River, twelve miles north of Florence, on their main through line, between the North and South, has been let to the PHILLIPS & ALLSPORT CONTRACT-

ING CO., ...d material is already being ... ground for the work, which ... placed on ... nced at once. The new trestle will be com... miles in length. The entire will be th... raised five feet above high trestle will ... obtained in the great freshet water mar... d September. The Santee and last August ... er trestles will be altered in Savannah ... so that traffic will never again be manne... high water in these rivers. be impede...

ELLIJA... A.—Bids are asked until April 6 by Gi... County for constructing a double-tra... steel bridge across the Ellijay River, the ...ructure to consist of one span stone and ... Also for construction of two piers at ... ent piers or 30-in. steel tubular ... bridge site. T. H. Tabor is Ordinary.

KNOXV... E, TENN.—W. H. Burk, of Knoxville, ... preparing plans for the construction ... the Asylum Ave. viaduct. S. D. Newton is ... Engr.

HAMIL... , OHIO.—Bids will be received until Mar... 31 by the Board of County Commissioners ... for furnishing material and constructing ... bridge at the Stevens-Weir farms, Re... Township. Bids on superstructure and ... substructure will be received separately. ... E. Brate, County Audr.

BOSTON, OHIO.—Bids will be received by the Count... Auditor of Clermont County, until noon, April 5, for the labor and material for the construction of an arch concrete culvert at Boston, Clermont County, Ohio. Estimate, $1,225. Commissioners, Clermont County, Ohio.

DAYTON, OHIO.—Bids are asked until March 18 by the County Commissioners for bridge material and repairs on account of damages to bridges by flood. Howard R. Klepinger is County Engr.

CLEVELAND, OHIO.—Bids are asked until 11 a. m., April 7, by the County Commissioners, William F. Black, Clk., for the construction of bridge work per report No. 2234, concrete arch, Barret Road, Olmstead Township.

NEWCASTLE, IND.—The PAN AMERICAN BRIDGE CO., Newcastle, has been awarded contract, at $4,190, for erecting a bridge on the Cadiz Pike for the County.

LAPORTE, IND.—Bids are asked by the County Commissioners until 10 a. m., April 6, for the construction of a bridge and abutments in Hanna Township, known as Spahr bridge.

JACKSON, MICH.—The city proposes to have a bridge constructed across the Grand River at Ganson St.

CARLINVILLE, ILL.—H. M. MINTON, Carlinville, has been awarded contract for building a new iron bridge over the slough and for repairing a bridge over Hodges Creek.

CHICAGO, ILL.—Bids will be received until 11 a. m., March 20, by John J. Hanberg, Comr. Pub. Wks., for removing old caps, walls and planking wherever necessary from the old pile protections, removing old chain from pile clumps, pulling old stumps and piles, and furnishing, delivering and driving new piles of the lengths required at the various bridges in the city; also for furnishing, delivering and putting in place all chain and spikes necessary.

Bids will be received until March 24 by L. J. Bryan, Clk. Bd. Trustees, Sanitary District of Chicago, American Trust Bldg., Chicago, for excavating a channel about 5,000 ft. long and containing about 375,000 cu. yds. of earth, constructing substructure and erection only of the superstructure of a bridge at Devon Ave., Township of Niles, city of Chicago.

*EVANSTON, ILL.—Bids are asked by the Board of Trustees of the Sanitary District of Chicago, until noon, March 31, for the substructure of a bridge over the North Shore Channel, at the crossing of the Chicago, Milwaukee & St. Paul Ry., near Chancellor St.

WATERTOWN, WIS.—Bids are asked by the Board of Public Works until 2 p. m., April 5, for furnishing all material and doing all the work necessary and required to construct and erect a reinforced-concrete girder bridge, together with abutments, over Silver Creek at Spaulding St.

NEW HAMPTON, IOWA.—Bids will be received until 1 p. m., April 6, by F. N. Lentz, County Audr., as a whole or separately, for ten concrete bridges.

DAKOTA CITY, NEB.—Bids will be received by W. L. Ross, County Clk., until noon, March 27, for building and repairing such bridges as may be ordered by the County Commissioners of Dakota County during one year immediately following execution of the contract with the successful bidder.

HUNTSVILLE, MO.—The STANDARD BRIDGE CO., Omaha, Neb., has been awarded the contract, at $10,050, to construct steel bridges in the county.

MENA, ARK.—The Polk County Commission on March 6 let a contract to the PENN BRIDGE CO., of Beaver Falls, Pa., for two new steel bridges, one over Rolling Fork at Grannis and one over the Cassatot River, east of Janssen, at about $11,700. The bridges are to be completed by Aug. 1.

SNOHOMISH, WASH.—The contract for the repair of the east approach of the Ebey Slough bridge has been awarded to W. G. HIATT, at $7.87 per M. ft. B. M.

SPOKANE, WASH.—Contracts will soon be let, it is stated, for the construction of the main central span of the Monroe St. bridge. Estimated cost of whole structure, $330,000.

SEATTLE, WASH.—R. H. Thomson, City Engr., has estimated the cost of constructing the pile bridge at Eighth Ave. South and other streets, at $355,000.

SALEM, ORE.—Contract has been awarded to ROBERT WAKEFIELD for the construction of the new bridge over Mill Creek at $45,691.

PHOENIX, ARIZ.—J. M. McClure, of Tucson, has been engaged as the Engineer for the proposed bridge to be constructed over the Salt River at Center St. Noted Feb. 18.

LEWISTON, IDAHO.—A bridge will be constructed here to connect Holbrook Island with the city.

WINNIPEG, MAN.—Bids will be received by P. E. Ryan, Secy. Transcontinental Railway Comn., until noon, April 8, for the construction of a steel bridge across the Red River here. Plans and specifications may be seen at the office of the Commission, Ottawa.

BUILDINGS.

(denotes that this work is advertised in Engineering News.)*

HARTFORD, CONN.—The Court of Common Council has adopted the recommendations of the Board of Finance, making appropriations of $600,000 for the Technical High School building and $450,000 for the municipal building. These matters will be submitted to the voters for confirmation at the spring meeting. Noted last week.

NEW LONDON, CONN.—The following awards have been made for the construction of various buildings at Fort H. G. Wright, N. Y., and Fort Terry, N. Y. At Fort Wright, N. Y.: W. H. FISSELL & CO., 1133 Broadway, New York, constructing two double barracks, $69,224 each; additional for concrete porch floors, $1,900; two double N. C. O. quarters, $7,737 each; two double firemen's quarters, $4,934 each. WALWORTH MFG. CO., 134 Federal St., Boston, Mass., heating, individual plants, two double barracks, $4,471 each; two double N. C. O. quarters, $570. WARNER & RITTENHOUSE, 1209 Ninth St., N. W., Washington, D. C., plumbing, two double barracks, $7,266 each; two double N. C. O. quarters, $728 each; two double firemen's quarters, $698 each. All wiring to W. E. CORRAO ELECTRIC CO., 1414 Chestnut St., St. Louis, Mo.

At Fort Terry N. Y.: CHARLES E. CURRIER CO., 110 Summer St., Boston, Mass., construction, one double barrack, $71,722; concrete floors for porch, $450; one single barrack, $40,052; for concrete floor porches, $400; one 4-set officers' quarters, $23,095; three double N. C. O. quarters, $7,880; one double firemen's quarters, $5,843. WALWORTH MFG. CO., 134 Federal St., Boston, for all heating on low bid for individual plant. WARNER & RITTENHOUSE, 1209 Ninth St., N. W., Washington, in accordance with their bid for all plumbing, less 1%. WILLIAM A. CARRAO ELECTRIC CO., 1414 Chestnut St., St. Louis, Mo., for all electric wiring. No award will be made for the field officers' quarters and the company officers' quarters at either post.

BUFFALO, N. Y.—G. N. Mead, 351 Lafayette Ave., will build at the corner of Walden Ave and Brinkman St a 2-story brick busines block, 80 × 66 ft., containing four stores and two assembly halls.

BUFFALO, N. Y.—A preparatory school for boys is to be built here, at a cost of $200,000, by an association headed by John J. Albright and Seymour H. Knox, on a site of 21 acres, facing Delaware Park, at Amherst St. and the Niagara Falls Boulevard. This site has been donated to the association by Mr. Albright. Final plans have not yet been drawn.

A 5-story business building, 68 × 200 ft., of brick and steel construction, is to be erected at Main and Tupper Sts., by James N. Byers, contractor and owner, 461 Linwood Ave.

The Board of Directors of the German Deaconess' Home, Kingsley St., near Humboldt Parkway, are making arrangements for building an addition and erecting a hospital building. Funds are being raised. Architects are not yet selected.

OSWEGO, N. Y.—Plans have been completed for a freight house to be erected by the Delaware, Lackawanna & Western R. R. Co. on Water St., extending from Bridge to Oneida Sts. The building will be 400 ft. in length by 30 ft. in width, and is to be of brick. One hundred feet will be two stories high, and the remainder one story. G. J. Ray is Ch. Engr., Hoboken, N. J.

NEW YORK, N. Y.—Bids are asked until 3 p. m., March 22, by C. B. J. Snyder, Supt. School Buildings, Dept. of Education, for removing, etc., the temporary school buildings now on the premises of Public School No. 51, Johnson and Briggs Aves., Richmond Hill, and re-erecting same on the premises of Public School No. 50, Wyckoff St., corner Humboldt Ave., Jamaica, and Public School No. 82, Kaplan Ave., Hammond and Horton Sts., Jamaica, Boro. of Queens. For alterations, repairs, etc., to Public School No. 86, Old Flushing Road, near Grand St., Maspeth, and Public School No. 88, Elm Ave. and Fresh Pond Road, Ridgewood Heights, Boro. of Queens.

Designs for a 4-story station building at the Manhattan terminal of the Brooklyn Bridge, Park Row, to cost $1,000,000, were approved at a meeting of the Municipal Art Commission on March 9. It will be a steel frame structure, with outside walls of granite, the roof to be copper and the exterior metal work cast bronze. The interior metal work will be cast iron. The designs are adapted from the classic. The architect is Francis L. V. Hoppin, 244 Fifth Ave.

Plans have been filed with the Buildings Superintendent for two 6-story apartment houses, one to contain 43 suites of apartments, to be built for the Mitow Realty Co., Barnet Hamburger, Pres., 24 East Broadway, on Broadway, north of 122d St., and one on Broadway from 181st to 182d Sts., containing 62 suites for the Bendheim Construction Co., both buildings from designs by George F. Pelham, Arch., 503 Fifth Ave. They are to cost $75,000 and $175,000, respectively.

A 7-story loft building will be erected by the Napoleon Construction Co., 206 Broadway, on 28th St., 350 ft. east of Sixth Ave., from designs by Thomas W. Lamb, Arch., 224 Fifth Ave. It is to cost $60,000. JANPOLE & WERNER, 206 Broadway, have the contract.

NEW YORK, N. Y.—We are officially advised that the THOMPSON-STARRETT CO., 49 Wall St., has been awarded a contract (tentatively) to erect a new theater for Charles Dillingham on Times Sq. The theater will cover a plot of ground 139 × 100 ft., facing 46th St., and with an arcade 88 ft. long, running through to Broadway. The 46th St. front will be constructed of limestone, stucco and ornamental iron, with a tile roof. Carrere & Hastings are Archs., 23 East 41st St.

McKim, Mead & White, Archs., 160 Fifth Ave., have filed plans with the Buildings Superintendent for the proposed enlargement of the Tiffany building at the corner of Fifth Ave. and 37th St., by an addition on the south, seven stories high, 41.8 ft. front and 111.8 ft. deep, giving the building an enlarged total avenue frontage of 158.9 ft. The addition is to cost $100,000.

Plans have been filed for a 6-story apartment house to contain 25 suites of apartments and to be erected for the Henry Morgenthau Realty Co., 165 Broadway, at a cost of $100,000, from designs by Neville & Bagge, 217 West 125th St., on 162d St., east of Broadway; and for a 6-story apartment house, with 25 suites, designed by the same architects for the Karmack Realty Co., 401 West 124th St., Alexander Allen, Pres., on 151st St., west of Broadway, to cost $90,000.

Covering the block front on the east side of Nassau St., from Pine to Cedar Sts., the Fourth National Bank will build a bank and office building. It will cost $2,000,000, representing, with the value of the land, an investment of $5,000,000.

Plans have been filed for a 5-story flat house, 50 × 90 ft., to be built for John Rauft, 83 Bleecker St., at the corner of Audubon Ave. and 168th St., containing 19 suites, and costing $60,000. Moore & Landsiedel, Third Ave. and 148th Sts., are Archs.

NEW YORK, N. Y.—Bids are asked until 11 a. m., April 17, by R. C. Hollyday, Ch. of Bureau of Yards and Docks, Navy Dept., Washington, D. C., for remodeling the contagious annex for female nurses' quarters at the U. S. Naval Hospital, New York. Specifications are on file at the office of Engineering News, New York.

NEW YORK, N. Y.—Bids are asked until 3 p. m., March 29, by C. B. J. Snyder, Supt. School Bldgs., Dept. of Education, for installing heating and ventilating apparatus for additions to and alterations in Public School No. 126, on the north side of Meserole Ave., between Lorimer and Guernsey Sts., Boro. of Brooklyn; in Public School No. 128, on the northerly side of 21st Ave., between 83d and 84th Sts., Boro. of Brooklyn, and in Public School No. 160, on the southerly side of Fort Hamilton Ave., between 151st and 152d Sts., Boro. of Brooklyn.

PHILADELPHIA, PA.—We are officially advised that estimates have been asked and are being received by Ballinger & Perrot, Archs., 1211 Arch St., on plans for an apartment house, 83 × 124 ft., in the French Renaissance style to be built at Wayne and Chelten Aves., Germantown, for J. W. Ross. The building, which will be known as the Whitehall apartment house, will have a front on Chelten Ave. of 83 ft. with a depth of 124 ft. on Wayne Ave. The main entrance will be on Chetten Ave. The building will have six stories and a basement, will be fireproof throughout, of brick with terra cotta trimmings and with numerous ornamental iron balconies. The roof will be of slate. The Whitehall will have a total of 75 bedrooms, with adjoining baths, parlors and reception rooms. The banquet hall and dining rooms will be located on the sixth floor. The second, third, fourth and fifth floors will be divided into bed chambers and reception rooms. A reception room, exchange, guests' room and smoking room, with a large entrance hall, will occupy the whole of the first floor. The basement floor will be divided into a billiard room, supply and store rooms and a laundry. The structure will cost $150,000; equipment, $50,000.

The contract for the erection of the new clubhouse and locker building for the Philadelphia Cricket Club in Chestnut Hill, to replace a building destroyed by fire, has been awarded to F. A. HAVENS & CO., Perry Bldg. The plans, which were prepared by George T. Pearson, Arch., 427 Walnut St., provide for a 2½-story stone clubhouse, 57 × 80 ft.; and a 1-story and basement locker building, also of stone, 104 × 35 ft. The work will cost about $40,000.

Work will be started within a few weeks upon the erection of the First Church of Christ, Scientist, which is to be built on the lot owned by the congregation, on the south side of Walnut St., east of 40th St. The contract has just been awarded to J. E. & A L PENNOCK, Land Title Bldg. The building has been designed by Carrere & Hastings, 28 East 41st St., New York. The site, for which $38,000 was paid, measures 125 × 215 ft., but the church will occupy only an area measuring 97 × 200 ft. It will be a 1-story structure with an exterior of stone. The cost is said to be about $80,000.

Permits for erection of three fireproof apartment houses in the northwestern section of the city have been granted John Stafford, Ridgewood Ave. and Dauphin St. Two will measure 41 × 104 ft. and will be built at the corner of 33d and Clifford Sts., and one will measure 41 × 84.2 ft. and will be built at the corner of Natrona and Clifford Sts. All will be four stories high. The cost is estimated at $140,000. Sauer & Hahn are Archs., 1112 Chestnut St.

Contract has been awarded to JOHN R. WIGGINS & CO., Heed Bldg., for constructing a laboratory building to cost $100,000 for John Wyeth & Bro., Inc., which will be erected on the site of the old factory buildings and coal yard at the corner of Twelfth St. and Washington Ave. The plans, by Werner Trumbower, Arch., Crozier Bldg., provide for a 3-story and basement concrete structure to measure 95 × 180 ft. The foundations will be of sufficient strength to carry three additional stories, which will be built at some future time.

PITTSBURG, PA.—The contract for the erection of the second building of the proposed University of Pittsburg group was let on March 11 to JAMES L. STUART, 341 Sixth Ave. A number of bids were submitted, but only those of local contractors were considered. Work has been started and it is expected that the building will be completed by Sept. 15. This building is for the classical department of the university and will provide more classroom space than the large building now occupied by this department on the North Side. It will be located immediately east of the building for the School of Mines.

DONORA, PA.—J. C. Fulton, of Uniontown, Pa., has been selected to prepare plans and specifications for the proposed Fifth St. public school. The building will be of brick, steel, stone and concrete, and will be fireproof. It will be two stories in height, will contain ten rooms, exclusive of teachers' rooms, offices, etc. The building will be 86 × 98 ft. in plan, will have modern ventilating and plumbing systems, and a private power plant. The building will cost $40,000, exclusive of plumbing and ventilating systems, furnishings, etc.

BALTIMORE, MD.—Bids are asked until 11 a. m., March 24, by the Board of Awards for erecting a school building at Reisterstown Road and Fifth Ave. Edward D. Preston is Inspector of Buildings.

Baldwin & Pennington, Archs., Professional Bldg., have been declared the winners in a competition with five other architects for plans for the enlargement of the Eutaw Savings Bank, at Fayette and Eutaw Sts. The improvements will consist of an addition of 60 ft. on the west side. The west wall will be taken out and the whole structure converted into one banking room, 60 ft. wide by 135 ft. long and 57 ft. high. The remodeling will cost about $200,000. William H. Hayden is Pres.

WASHINGTON, D. C.—Bids were received as follows on March 13 at the office of the Superintendent of the U. S. Capitol Building and Grounds, Washington, D. C., for furnishing the cut stone for the addition to the court-house, Washington: Ruilman & Willson, Baltimore, $42,270; Furst-Kerber Cut Stone Co., 443 Fifth Ave., Chicago, $29,500; Henry Struble Cut Stone Co., Chicago, $37,630; William Bradley & Sons, New York, $35,975; Indiana Cut Stone Co., Bedford, Ind., $34,843; J. Walter Maxwell, Philadelphia, $45,075; George Mann, Baltimore, $34,-566; David N. Andrews Co., Baltimore, $35,-600; Wassett Stone Co., Wilmington, Del., $30,260; Norcross Bros. Co., Worcester, Mass., $56,800, $63,800; Oman Bowling Green Stone Co., Nashville, Tenn., $59,800; Malmati Stone Co., Washington, $39,500; Frank L. Wagner, Washington, $31,740; B. A. & G. N. Williams, New York, $35,968; Richardson & Burgess, Washington, $30,555; William B. Spencer, Washington, $35,944; George E. Esher, Washington, $34,700.

Bids are asked by Bernard R. Green, Supt. of Constr., National Museum, Washington, until 2 p. m., March 23, for furnishing, delivering and setting in place complete, the marble wall bases, plinths, floor tiling, etc., and the limestone screens for the south pavilion of the new building for the National Museum, in this city.

*FAYETTEVILLE, N. C.—Bids are asked until 3 p. m., April 15, by James Knox Taylor, Superv. Arch., Treasury Dept., Washington, D. C., for the construction (including plumbing, gas piping, heating apparatus, electric conduits and wiring) of the U. S. post-office at Fayetteville.

SUMTER, S. C.—Bids are asked until 3 p. m., April 19, by James Knox Taylor, Superv. Arch., Treasury Dept., Washington, D. C., for construction, complete, of U. S. post-office building at Sumter.

GREENVILLE, MISS.—James Knox Taylor, Superv. Arch., Treasury Dept., Washington, D. C., has awarded contract for the construction of a post-office at Greenville, Miss., to GUDE & CO., Prudential Bldg., Atlanta, Ga., at $59,500. Time, Feb. 1, 1910. A list of bids was given in issue of Feb. 25.

BLOOMINGTON, IND.—JOHN F. AIRING & SONS have been awarded a contract for the construction of a church for the Central Methodist Congregation. Cost, $95,000.

SOUTH BEND, IND.—Mrs. M. J. Good has ordered plans for the construction of an Old Ladies' Home near this city. Estimated cost, $100,000.

INDIANAPOLIS, IND.—The Indianapolis "News" states that on March 8 C. A. Bookwalter, Mayor, and the Board of Works received bids for constructing the proposed city-hall. The lowest bids offered by the general bidders were: Alling Construction Co., $514,000; Westlake Construction Co., $519,900; Henry Dollman, $524,000; William P. Jungclaus Co., $529,875; Lynn Millikan, $558,846. The Alling company's bid was supplemented by a fourth proposal by which the company proposed to reduce its bid $15,-000 if steel rods and reinforced-concrete fireproofing were substituted for the granite, but the Architects, Rubush & Hunter, indicated that this would probably not be considered. The two other Alling bids, on finer grades of granite, were $521,000 and $526,-000. The Westlake company's other bids were $521,000 and $516,000 (for rock and granite). Mr. Dollman filed only one bid on a superior grade of granite, it being $351,-000. Mr. Millikan offered one superior grade of granite at the figure of his low bid, and another superior granite at $568,511.85. The Jungclaus company made only the one bid. All made four alternate bids. Two of these were on alternate plans on the stone work—(a) the substitution of Imperial Bedford stone for all the granite; (b) the other the substitution of Imperial Bedford stone for all the granite except that of the front foundations, steps and curbing of the building. These bids made the following reductions from the bids printed above: Alling Construction Co. (a) $7,000, (b) $3,000; Westlake Construction Co. (a) $10,000, (b) $6,-500; Henry Dollman (a) $10,000, (b) $6,-500; Jungclaus Co. (a) $9,800, (b) $6,500; Millikan (a) $9,857, (b) $6,581. The other two alternate bids were on the marble work. The plans specify pencil vein Italian marble. The first substitute is (a) English vein white Italian marble, the second substitute (b) Vermont marble. The bids were for the fol-

lowing deductions, except in two cases, where the amount is to be added: Alling Co. (a) $1,200, (b) $4,000; Westlake Co. (a) $1,300, (b) $6,000; Dollman (a) $1,280, (b) $8,000; Jungclaus (a) add $1,200, (b) $5,-000; Millikan (a) add $1,200, (b) $5,121.

The bids on the steam heating contract were as follows: George W. Keyser, $28,-620; Woolen & Callon, $29,200; William H. Conklin Co., Columbus, Ohio, $24,887; Kruse & Dewenter Co., $26,714; W. H. Johnson & Son Co., $27,986; Hayes Brothers, $28,000; Huffman-Conklin Co., Columbus, Ohio, $26,-866; J. A. Diggle, $26,659; Kirkhoff Bros. & Co., $26,348; Brooks Engineering Co., $23,000.

There were three bidders on the electric wiring and light fixtures contract: the Hatfield Electric Co., at $28,093; the F. H. Cheney Electric Co., $28,778, and the Sanborn-Marsh Electric Co.. $30,260.

The bids for plumbing and gas fitting were: Indianapolis Plumbing & Heating Co. (a) Mott fixtures, $8,500, (b) Clow's fixtures, $7,379, (c) Knight & Jillson fixtures, $7,312; George W. Keyser, $9,613; J. A. Digle (a) $10,926, (c) $9,062; Hayes Bros. (a) $9,550, (b) $8,700, (c) $8,675; Foley Bros. & Co. (a) $13,483, (b) $11,856, (c) $11,822; Kirkhoff Bros. & Co., $10,447. Rubush & Hunter, American Central Life Bldg., Indianapolis, are Archs.

DETROIT, MICH.—A combination store and flat building is to be erected at the southeast corner of Kercheval and McClellan Aves. for G. S. French. It will be 75 × 67 ft., with paving brick and cut stone exterior. The ground floor will contain four stores and the second floor three flats and several offices. The entire building will be heated by steam. The plans are by Pollmar & Ropes, Archs. The SCHMEID-SISSMAN CO. has the general contract.

MOLINE, ILL.—Bids were received as follows on March 10 by James Knox Taylor, Superv. Arch., Treasury Dept., Washington, for the construction of a post-office building at Moline, Ill.: Bartlett & Kling, Cedar Rapids, Iowa, $90,000; M. Yeager & Son, Danville, Ill., $84,998; W. J. McAlpine, Dixon, Ill., $87,600; Standard Construction Co., Chicago, $84,900; Northern Construction Co., Milwaukee, Wis., $89,000; James de Vault & Son, Canton, Ohio, $80,900; F. M. Roode, Tipton, Ind., $86,250; General Construction Co., Milwaukee, Wis., $84,685; Scheurman Lumber Co., Inc., Saginaw, Mich., $85,000; McHenry-Beatty Co., East Liverpool, Ohio, $88,800; August Ohm, Terre Haute, Ind., $82,183; King Lumber Co., Charlottesville, Va., $29,780. Time, March 1, 1910.

SIGOURNEY, IOWA.—The contract for the proposed court-house has been let to J. L. SIMMONS & CO., 2126 West Madison St., Chicago. The building will cost $82,998.

MINNEAPOLIS, MINN.—Plans have been commenced in the office of W. M. Kenyon, Arch., of the Minneapolis, St. Paul & Saulte Sts. Marie Ry. Co., for the addition of two stories to the new general office building of the company on Second Ave. South. Raising the building from six to eight stories will add about $60,000 to the original cost of $216,000. It is not decided when the office building will be commenced, as much will depend upon the final arrangements of details in the combination of the office forces of the line and the Wisconsin Railroad.

PITTSBURG, KAN.—Bids are asked until 3 p. m., April 14, by James Knox Taylor, Superv. Arch., Treasury Dept., for the construction (complete) of the U. S. post-office at Pittsburg.

OMAHA, NEB.—Bids are asked by Capt. C. de F. Chandler, Constr. Q. M., Fort Omaha, until 11 a. m., April 7, for constructing, plumbing, heating, electric wiring and electric fixtures for the following buildings at Fort Omaha, Neb.: One double barracks, one stable, one stable guard and shop building and one gun shed.

OMAHA, NEB.—Bids were opened March 1 by the County Commissioners for erecting the proposed court-house as follows: Caldwell & Drake, Columbus, Ind., 20 months, $824,846; H. Ellenberger Co., Chicago, Ill., two years, $868,650; V. Jobst, Peoria, Ill., two years, $889,500; James Black Masonry & Construction Co., St. Louis, Mo., two years, $873,333; Morrow Bros., Baltimore, Md., two years, $841,830; B. J. Jobst, Omaha, 2½ years, $892,500; James Black Masonry & Construction Co., St. Louis, $894,847; Ladd-Sawyer Construction Co., Denver, Colo., $964,249; James Black Masonry & Contracting Co., St. Louis, two years, $900,000; James Black Masonry & Contracting Co., St. Louis, 2½ years, $945,-000; Ambrose Stannard, St. James Bldg., New York, two years, $1,042,681; F. P. Gould & Son, Omaha, 2½ years, $974,583; other material, 2½ years, $968,000; John H. Harte, Omaha, 2½ years, $948,634; Northern Construction Co., Milwaukee, Wis., two years, $932,000, 2½ years, $932,000; R. Burke, Omaha, 2½ years, $1,080,000; General Construction Co., Milwaukee, Wis., 2½ years, $987,000; C. R. Vaughn, St. Louis, Mo., two years, $970,608; Hilger & Co., Chicago, two years, $1,088,976; 2½ years, $1,-076,976; William Grace Co., Chicago, Ill., two years, $962,000; W. Peterson, Omaha, 2½ years, $1,110,000; B. J. Jobst, Omaha, two years, $915,000; A. & S. Wilson Co., Pittsburg, two years, $942,000; 2½ years, $936,000; Thompson-Starrett Co., Chicago, Ill., 2½ years, $985,000; Conners Bros. Co., Lowell, Mass., 2½ years, $1,035,000.

*KEARNEY, NEB.—Bids are asked by James Knox Taylor, Superv. Arch., Treasury Dept., Washington, D. C., until 3 p. m., April 20, for construction complete of U. S. post-office at Kearney.

ST. LOUIS, MO.—A combination store, office, storage and roof garden building will be erected at the southwest corner of Euclid Ave. and Delmar Boulevard by Oliver P. Langan, Pres. of the Langan & Taylor Storage & Moving Co. The structure will cost $250,000. The building will front 155 ft. to the north on the south side of Delmar Boulevard and 135 ft. on the west side of Euclid Ave., and will be eight stories high, with full basement and roof garden. There will be eleven stores on the first floor, fifteen offices on the second floor above the first. The exterior of the building will have polished granite base and will be faced with light buff Bedford stone up to the third story. The entrances will be of carved white carthage stone and the upper portion will be faced with dark red mottled vitrified brick. E. Ross Chamblin, Hollan Bldg., St. Louis, is Arch.

HOUSTON, TEX.—The contract for the proposed $125,000 Majestic theater building has been let to H. L. STEVENS, and work will begin at once, with the contract calling for the building to be ready for occupancy by Oct. 1. Moran, Russell & Gardner, Chemical Bldg., St. Louis, Mo., are Archs.

FORT MASON (San Francisco post-office), CAL.—Bids are asked until 11 a. m., March 24, by Major George McK. Williamson, Q. M., U. S. A., for constructing one barrack building, one band barrack building and three double N. C. O. quarters, also installing heating, plumbing and electric wiring in same.

The site for the Army Department headquarters in San Francisco was selected on Feb. 25 by Major General J. F. Weston, the Commander of the Department of California. The building is to be erected at Fort Mason immediately in front of the Commander's present quarters and facing the entrance to Fort Mason at the north end of Van Ness Ave. It is to be of stone and concrete, three stories high, and to cost $100,000. The labor will be done by the prisoners at Fort Alcatraz.

SAN FRANCISCO, CAL.—A building permit has been issued to Newman Bros. for a 3-story brick building to contain stores and lofts at the corner of Davis and Sacramento Sts., to cost about $70,000.

Plans for a Class A 10-story office building to be built at the corner of California and Battery Sts are being drawn by Lewis P. Hobart, Arch., Crocker Bldg., for the White Investment Co. The structure will cost $200,000. The building is to be of steel and fireproof material will be used in its construction, stone being used in the lower two floors and stone and brick above. The lot upon which the building will stand is 54 × 63 ft. The main entrance will be in California St.

A wing, costing $1,000,000, is to be built on the St. Francis Hotel, San Francisco. Bliss & Faville, 15 Second St., are Archs.

LOS ANGELES, CAL.—Franklin P. Burnham, Arch., Pacific Electric Bldg., has been commissioned by the Los Angeles Board of Education to prepare plans for a technical school building to be erected on the grounds of the Polytechnic High School on Washington St. at an estimated cost of $80,000. The following architects have been selected to make preliminary sketches for grammar grade building: Homer W. Glidden, 11-room building, Normandie Ave., $30,000; Julius W. Krause, Stimson Bldg., 9-room building, Hoover and 52d Sts., $20,000; Hudson & Munsell, Stimson Bldg., Main St. addition, $10,000; A. B. Benton, 9-room building, San Pedro and 66th Sts., $20,000; Morgan & Walls, 4-room building, 51st St., $10,-000; Theodore A. Eisen & Son, 4-room addition, Bridge St., $10,000; Hunt, Eager & Burns, 8-room annex, Hooper Ave., $20,000; Barnett & Edelman, 9-room building, Denver Ave., $20,000.

Contracts will be let at once for excavating for the 8-story reinforced-concrete office building to be erected at the corner of Main and Second Sts. by Thomas Higgins, at a cost of about $400,000. Tenants of buildings on the site have been notified to vacate by April 1, and soon after that date construction will be begun. The structure is to be completed this year. Plans for the building practically have been completed by A. L. Haley, Inc., Henne Bldg., Arch., and C. A. Martin, Consult. Engr., associated. The building will have a frontage of 120 ft. on Main St. and of 164 ft. on Second St. It will contain 231 offices, averaging 16 × 22 ft. in size. The distance between floors will be 11 ft. 6 ins., with the exception of the first floor, which will have a height of 20 ft. There will be a court 52 ft. square. The main basement will be 12 ft. deep. That portion in which the power plant will be located will be deeper. There will be three high-power passenger elevators and a freight elevator. Direct and alternating electric currents will be supplied. The exterior of the building will be faced with concrete and will have metal cornices. The window frames will be of metal and will contain wire glass. The trimmings throughout probably will be metal.

TORONTO, ONT.—Bids are asked until 5 p. m., March 22, by Darling & Pearson, Archs., Imperial Bank Bldg., for the erection of a building for the Faculty of Education, University of Toronto, corner of Bloor St. and Spadina Ave.

ST. BONIFACE, MAN.—SENECAL & SMITH have secured the contract for an addition to St. Mary's Academy at $80,000, according to plans prepared by Senecal & Hudson, St. Boniface, Man.

WATER SUPPLY—IRRIGATION.

(denotes that this work is advertised in Engineering News.)*

*FORT GETTY, R. I.—DARLING & SLADE, 56 North Main St., Fall River, Mass., have been awarded contract for water supply system for Fort Getty at $5,459. Bids were opened on Feb. 23 by Capt. Willis C. Metcalf, Q. M., U. S. A., Newport. List of bidders noted on March 4.

SYRACUSE, N. Y.—The U. S. CAST IRON PIPE & FOUNDRY CO., 71 Broadway, New York, has been awarded contract for 304 tons of 12, 10, 8 and 6-in. pipe at $22.70 per ton, and 40,000 lbs. specials at 2¼ cts. per lb. Total cost, $7,901. Bids were opened on March 1.

ILION, N. Y.—Bids will be received until March 25 by the Board of Water Commissioners, A. N. Russell, Secy., for constructing a puddle trench about 300 ft. long and from 6 to 40 ft. deep, with puddle wall 4 ft. thick. The work is located at reservoir No. 2, about 2½ miles from the village.

ROCHESTER, N. Y.—The Board of Contract and Supply on March 3 awarded contract to the THOMSON METER CO., 79 Washington St., Brooklyn, N. Y., for Lambert meters to cover their requirements for the year 1909. From 3,000 to 6,000 will be required.

*NEW YORK, N. Y.—Bids were received on March 11 as follows by the Board of Water Supply for the construction of a portion of the Catskill aqueduct, situated east of the Hudson River in the town of Yorktown, Westchester County; Robert C. Storrie, Nicetown, Philadelphia, Pa., $1,023,615; Gore-Neenan Co., 206 Broadway, New York, $1,079,680; Glyndon Contracting Co., 2 Rector St., New York, $1,109,102; Pearson & Son, Long Island City, N. Y., $1,418,502; American Pipe & Construction Co., Philadelphia, Pa., $1,468,445; J. H. Gray, Fuller Bldg., New York, $1,921,585; Mason & Hanger, Richmond, Ky., $1,158,702; M. A. Talbot, Baltimore, Md., $1,223,520; Bradley Contracting Co., informal; John J. Hopper, 215 W. 125th St., New York, $1,276,265; J. Connelly Co., Baltimore, Md., $1,271,315; Patrick McGovern, Boston, Mass., $1,287,-887; Horton & Brown, 215 West 123d St., New York, $1,756,270; Ferguson Contracting Co., 37 Wall St., New York, $1,377,930; Sundstrom-Stratton Co., 90 West St., New York, $1,129,633; Degnon Contracting Co., 60 Wall St., New York, $1,213,265; Snare & Triest, 143 Liberty St., New York, $1,-109,135.

*NEWBURGH, N. Y.—Bids are asked until 5 p. m., April 5, by D. J. Coutant, City Clk., for granite block paving on Water St. William J. Blake, Jr., is City Engr.

BRANCHVILLE, N. J.—Fritts & Partridge, of Dover, N. J., submitted the lowest bid to the Mayor and Common Council on March 10 for the construction of the water system, at $27,083. W. E. Sexton is Engr.

READING, PA.—Bids will be received by the Board of Water Commissioners, Lincoln S. Ramsey, Secy., until March 23 for furnishing c.-i. pipes and special castings, gate boxes, fire hydrants, gate valves, corporation cocks and for laying water pipes and puming main.

*PHILADELPHIA, PA.—Seven bids were opened by the Department of Public Works on March 15 for the construction at Queen Lane of a slow sand filtration plant, with preliminary filters to remove the turbidity from the Schuylkill River water before being treated by the finer filters for the removal of bacteria. The capacity is to be 70,000,000 gallons a day. The bidders were: Millard & Lupton Co., McDermott Construction Co., Millard Construction Co., Michael O'Rourke, Wetwater & Casey, Columbus, Ohio, David Peoples, Robert Peitrello, Mack Paving & Construction Co.

Bids were opened also for restoring filtration sand, after washing, at the different filtration plants, representing a total expenditure for the year of about $10,000, on which there were 14 bidders. These bids were ordered scheduled.

RICHMOND, PA.—The contract for the settling basin flume was awarded by the Common Council on March 5 to the PIEDMONT CONSTRUCTION CO., of Atlanta, Ga.

WILMINGTON, DEL.—The American Pipe Co., of Philadelphia, on March 9 awarded to J. J. WILLIAMS & CO., of Chester, Pa., the contract for laying about 1,500 ft. of pipe in the Christiana River, at Wilmington, at about $26,000. The pipe will be 20 ins. in diameter and will be laid in trenches at a depth of 22 ft. from high water mark.

OAKLAND, MD.—Bids are asked by the Mayor and Council until March 29 for the construction of a water-works system here. Penniman & Fairly, Marine Bank Bldg., Baltimore, are Engrs.

RICHMOND, VA.—The Mayor in his annual message recommends the erection of a water tower or elevated tank near 11th and Cary Sts.

JACKSONVILLE, FLA.—Bids will be received by the Trustees for the Water-Works and Improvement Bonds, Bron H. Barnett, Chn., until April 5 for furnishing f. o. b. Jacksonville, two motor-driven centrifugal fire pumps, each of sufficient capacity to deliver 2,000 gallons per min. against a pressure at the discharge of 175 lbs. to the sq. in. Alternate bids are asked for furnishing two pumps of 2,500 gallons each.

*DECATUR, ALA.—Bids are asked until 10 a. m., April 12, by the Morgan County Commissioners for constructing 27½ miles of macadam roads. Bullen & Boyd are Engrs.

FORT MORGAN, ALA.—Contract was awarded on Feb. 26 to MICHAEL T. JUDGE and W. I. EMERY for the erection of a 25,-000-gallon cistern and other work on the reservation at Fort Morgan.

NEW ORLEANS, LA.—Bids will be received until 3 p. m., April 6, by the Sewerage and Water Board, George G. Earl, Supt., for furnishing water meters and meter boxes.

LORAIN, OHIO.—We are officially advised that all bids have been rejected for furnishing and delivering one deep-well pump of about 10,000 gallons per hr.

BARBERTON, OHIO.—Bids are asked until noon, March 23, by the Board of Public Affairs, H. M. Royston, Clk., for extension of water-works system, requiring 429 tons of c.-i. pipe, 41 hydrants, etc.

TOLEDO, OHIO.—Bids will be received until April 8 by the Board of Public Works, Reynold Volt, Secy., for furnishing and delivering f. o. b. cars iron pipe, special castings, valves, sluice gates, etc., Contract No. 13 of the improvement of water supply.

ELKTON, MICH.—Bids will be received by W. L. Doyle, Village Clk., until April 1 for the construction of a system of water-works here. John H. Bloomshield, of Bay City, Mich., is Engr.

JACKSONVILLE, ILL.—Bids were opened on Feb. 25 by the city as follows for the purchase of water pipe for East Lafayette Ave., Franklin St., East Caldwell St.: Jacksonv[illegible] 6-in. water main, $25.75 2⅝ cts. per lb.; pig lead Elmer E. Beastall, 6-in. tings, 2½ cts.; pig lead, Co., 6-in. pipe, $26.50 cts.; all special cast ders, Keefe & Co., 6-in. tings, $2.90; split tees, lead, $4.50. Crane & Co., fittings, 3 cts.; pig lead Gause, 6-in. pipe, $26; spe lead, $4.55.

[illegible]ge Ave. and [illegible]Plumbing Co., [illegible]ton; fittings, [illegible]80 per cwt.; [illegible]$25.98; St. Barker Iron [illegible] lead, 4½ [illegible]$32. Lan-[illegible]$29.20; St. [illegible] cwt.; pig [illegible]pipe, $26.10. [illegible]. Bernard [illegible]2½ cts.; pig

ROCK ISLAND, ILL.—T[illegible]BODY, of Youngstown, Ohi[illegible] HENDERSON, of Warren, [illegible] awarded contract for the c[illegible] water-works filter plant at $130,000.

[illegible]AS LIGHT-[illegible] WILLIAM [illegible] have been [illegible]tion of the [illegible] Island, at

MILWAUKEE, WIS.—The [illegible]nishing material and laying [illegible]ct for fur-[illegible] ft. of 36-in. c.-i. water ma[illegible]13,300 lin. on March 1, has been awar[illegible]ds opened to R. J. HICKEY, of Milw[illegible]the city per ft. Charles J. Poetsch[illegible] at $1.74 [illegible]Engr.

RICHLAND CENTER, WI[illegible] received by R. Sutton, City [illegible]ls will be 9, for the furnishing and [illegible]until April 5,000 ft. of 8 and 10-in. c.-[illegible] of about castings, valves and hydran[illegible] Special purchased. W. G. Kirchoff[illegible] also be [illegible]Engr.

JACKSON, MINN.—W. D[illegible]VELL, of Minneapolis, has been award[illegible]ntract by the city for laying a water m[illegible]r $8,750. All bids opened on Feb. 2[illegible] the tower and tank have been reject[illegible] bids will be received until March 19. [illegible] Wolff, of St. Paul, is Engr.; J. G. Rob[illegible]n is Vil-lage Clk.

DULUTH, MINN.—The Wate[illegible]nd Light Board has awarded contract f[illegible] a double-acting triplex pump for the n[illegible] station of the middle water system at 1[illegible] Ave. East and Sixth St., to the GENERA[illegible]ELECTRIC CO., of Schenectady, N. Y., at $[illegible].

INTERNATIONAL FALLS, [illegible]INN.—THE COOK CONSTRUCTION CO., of [illegible] Moines, Iowa, has been awarded cont[illegible] by the city for constructing water-work[illegible] here at $14,382. Bids were opened on Feb. 27. Other bidders were: A. D. Lovell, Minneapolis, $14,715; J. Kennedy, Duluth, $14,-853.

GARDEN CITY, KAN.—William Linder awarded contract on March 3 to S. V. WARDALL for the installation of a 20 HP. D. & D. engine on his place 16 miles northwest of here, to furnish power for an irrigation plant which he is installing on his farm. The pump will have a capacity of 800 gallons per min.

LITCHFIELD, NEB.—Bids will be received until April 1 for the construction of water-works. Estimated cost, $10,500.

SCOTTSBLUFF, NEB.—The contract for constructing water-works here has been awarded to the KATZ-CRAIG CONSTRUCTION CO., of Omaha, at $27,660.

BELLE FOURCHE, S. DAK.—The following contracts for the installation of steel lateral and sub-lateral headgates in the Belle Fourche irrigation project, S. Dak., have been awarded: To the GREELEY HEADGATE CO., of Greeley, Colo., 126 headgates at $2,080; to the COFFIN VALVE CO., of Boston, Mass., nine gates at $862.

*CHEYENNE, WYO.—Bids are asked until 2 p. m., April 5, by J. D. Wright, City Clk., for water pipe and material. C. C. Carlisle is City Engr.

GLASGOW, MO.—The city has voted $8,000 of bonds for the extension and improvement of water-works.

LAKE VILLAGE, ARK.—Bids will be received until April 6 by the Board of Improvement, District No. 4, Herman Carlton, Secy., for a brick power-house and pump pit, 300-gallon power pump and 30-HP. gasoline engine, with accessories, 50,000-gallon hemispherical bottom steel tank on tower 125 ft. high, three miles of 4 to 8-in. mains, hydrants, valves, etc. Lund & Hill are Engrs., Little Rock, Ark.

BROWNWOOD, TEX.—The City Council has awarded contract to HOOD & STAGGS, of Broownwood, at $4,440 for constructing a pump station at the city water-works. The building is to be of brick, foundation to be raised to height of 6 ft. and filled in, in order that concrete floors can be used.

*GREENVILLE, TEX.—Bids will be received at the office of the City Secretary until noon, April 6, for the delivery, erection and installation of the following machinery: One compound condensing pumping engine, one surface condenser and such other appliances as may be deemed necessary. Forms of proposals, specifications and instructions to contractors can be obtained from the City Secretary, Greenville, or from J. W. Maxcy Co., Consult. Engrs., Houston, Tex.

*LINDSAY, OKLA.—Bids will be received by the Hon. Ed. Sheegog, Lindsay, until March 31 for the purchase by the city of the necessary machinery for the construction of a system of water-works. Specifications covering requirements can be had by addressing the O'Neil Engineering Co., Dallas, Tex.

TULSA, OKLA.—The city has awarded contract to the PLATT IRON WORKS CO., of Dayton, Ohio, for one 18 and [illegible] × 11½ × 36 Corliss pumping engine at $14,950. Bids ranged from $13,600 to $18,800.

GREELEY, COLO.—Frank J. McCarthy, of Denver, has filed maps, plans and specifications, it is stated, with the County Clerk for an irrigation system and reservoir. The water to be secured from the South Platte and St. Vrain Rivers. Capacity of reservoir, 15,-246,000,000 cu. ft. Estimated cost of ditches and reservoir, $200,000.

EARL, COLO.—The Model Land & Irrigation Co. has awarded contract, it is stated, to McCABE & STEEN, of Kansas City, Mo., for an irrigation system at Earl. Estimated cost, about $300,000.

TACOMA, WASH.—H. T. McGregor, Comr. Pub. Wks., on March 5 opened bids as follows for additions to the water system: For

work on the new pumping station and 500,000-gallon reservoir at South Tacoma, George Milton Savage, $8,680; John Huntington, $8,000; Joe Wells, $6,594; for the construction of the 22-inch stave pipe line from Station C to the site of the new Fletcher Heights standpipe, George Milton Savage, $45,370; the Keasey Construction Co., $46,980; Joe Wells, $4[illegible]3.

PORT STEVENS, ORE.—Bids in triplicate, will be received by the Constructing Q. M., U. S. A., until 2 p. m., March 31, for the construction of six cisterns, capacity, 5,000 gallons each, for the storage of rain water for use in public buildings at Fort Stevens.

SANTA ANA, CAL.—The following bids were received on March 1 by the City Council for furnishing additional pumping machinery for the water-works plant: Doak Gas Engine Co., Oakland, Cal., $7,800; George F. Dow Pumping Engine Co., 179 First St., San Francisco, $5,990; Pacific Coast Mfg. Co., Los Angeles, $10,350 and $9,550; Fairbanks, Morse & Co., Los Angeles, $11,0[illegible]; J. F. Connell, Los Angeles, $5,200; Smith-Boothe Usher Co., Los Angeles, $5,2[illegible] and $7,428; Frank J. Kimball, Los Angeles, $4,639 and $6,290; American Machinery & Construction Co., Los Angeles, $5,350 and $9,300; Western Gas Engine Co., Los Angeles, $7,639 and $11,742; Baker Iron Works, Los Angeles, $5,056 and $6,218.

BISBEE, ARIZ.—The UNITED STATES PIPE CO., of Birmingham, Ala., was awarded on March 3 by the City Council contract for supplying 2,000 tons of iron pipe at $30.50 a ton.

MONCTON, N. B.—The City Council has decided to extend until March 20 the time for receiving tenders for the electric turbo-pump.

EDMONTON, ALTA.—Bids will be received by the City Commissioners until noon, March 22, for the water pipes and specials required by the city for the current year.

SEWERAGE.

(denotes that this work is advertised in Engineering News.)*

BOSTON, MASS.—The Finance Board on March 1 passed a sewer loan of $643,000, for sewerage works connected with the Charles River basin.

SYRACUSE, N. Y.—Bids will probably soon be asked by the city for the construction of a main sewer to extend from Spencer St. to South Ave. Estimated cost, $200,000. Glenn D. Holmes is Ch. Engr.

BUFFALO, N. Y.—Bids have been received as follows by the city for the construction of a 36, 33 and 24-in. brick, 20 and 18-in. tile sewer in Angle, Tyler and Flower Sts. and along easement of Delaware, Lackawanna & Western R. R. between Merrimac and Custer Sts., and an 18, 12 and 10-in. tile sewer in the center and northeast side of Tyler St., between Angle St. and southeast end of same, and a 15 and 10-in. tile sewer in Flower St. and southwest side of Tyler St., between Angle and southeast end of Tyler St., and a 15, 12 and 10-in. tile sewer in Custer St., between Delaware, Lackawanna & Western R. R. and Main St.: George C. Waite, 85 Parkside Ave., $12,498; William Franklin, $13,800; W. G. Smith, $13,900; Dark & Co., $14,350; Benj. F. Spire, $14,769; Frederick J. Mumm, $15,908; Henry P. Burgard Co., $16,800; John Miller, $18,327; William A. Rappich and William C. Cullinton, $19,115.

NEW YORK, N. Y.—Bids are asked until March 23 by John F. Ahearn, Pres. Manhattan Borough, for furnishing all the labor and material required for repairs, rebuilding and reconstruction of brick, pipe and box, sewers, in the Borough of Manhattan, during the year 1909.

NEW YORK, N. Y.—Bids were received as follows on March 10 by John F. Ahearn, Pres. Boro. of Manhattan, for furnishing all labor and materials required for sewer and appurtenances in West 177th St., from Fort Washington Ave. to Riverside Drive: Thomas A. Reilley, $18,945; Joseph Moore, $25,855; Michael Marrone, $20,635; Bart Dunn, $24,043; Walter J. Ford, $24,692; Smith & Fitzgerald, $29,000; W. J. Brennan, $24,134; Briggs & McLaughlin, $27,212; Haggerty Contracting Co., $19,576.

BROOKLYN, N. Y.—Bids are asked by Bird S. Coler, Boro. Pres., until 11 a. m., March 31, for constructing sewers and sewer basins in various streets.

AVALON, N. J.—The contract for about 7,400 lin. ft. of terra cotta sewer, bids opened on March 5, has been awarded to the ATLANTIC CONSTRUCTION & SUPPLY CO., Bartlett Bldg., Atlantic City, at $3,500. R. L. Goff is Boro. Engr., Ocean City.

*ASBURY PARK, N. J.—The UNITED PAVING CO., of Atlantic City, was awarded contract for the installation of a sewerage pumping station and disposal plant at $27,272. Bids were opened on March 1. List of bidders noted on March 4.

*FREDERICK, MD.—See item under Streets and Roads.

*BALTIMORE, MD.—Bids will be received by the Board of Awards at the office of J. Sewell Thomas, City Register, City Hall, Baltimore, until 11 a. m., April 7, for building sanitary sewers, Contracts Nos. 38 and 39, as shown on plans on file in the office of Calvin W. Hendrick, Ch. Engr.

BALTIMORE, MD.—According to the "Baltimore Sun" the Board of Estimates and the Sewerage Commission have adopted the plans suggested by the property owners and residents of Forrst Park, the Reisterstown road and vicinity for the construction of a separate sewerage system for the section. The Commission will build the trunk lines, while the property owners will lay the laterals and construct a disposal plant. It is estimated that the plant will cost about $30,000. All the work will be done under the supervision of the Sewerage Commission. The Commission has approved specifications for two sections of laterals to be constructed in East and Northeast Baltimore.

T. WALLACE REILLY has been awarded contract at $66,545 for constructing eleven miles of lateral sewers.

WINCHESTER, VA.—Bids are asked until noon, March 25, by the city for the construction of a system of sanitary sewers and intermittent filtration plant. N. Wilson Davis, Harrisonburg, Va., is Engr.

CEDARTOWN, GA.—Bids will be received until April 6 by J. B. Lacy, St. Comr., for laying about two miles of sewer. S. S. Evans is City Engr.

LOUISVILLE, KY.—Bids for the construction of the 12th St. sewer, Contract No. 25, were opened by the Commissioners of Sewerage on Feb. 26. The contract has been awarded to the T. J. O'CONNELL CO., of Baltimore, Md., at about $80,000. The work consists mainly of constructing a reinforced-concrete sewer about 3,900 ft. long and from 16 ft. to 27 ft. deep, including about 3,350 cu. yds. of concrete, and 320,000 lbs. of steel. J. B. F. Breed is Ch. Engr.

EATON, OHIO.—Bids are asked until noon, March 24, by C. F. Ressler, Village Clk., for constructing a sewage disposal plant, the work to include the following: Six filter beds, 70x100 ft. × 3 ft. deep, two concrete tanks, capacity 32,000 gallons each, one grit chamber and flume channel, controlling house and machinery, 6,894 cu. yds. of excavation, 6,505 cu. yds. of embankment, 4,489 cu. yds. of filtering material, 184 cu. yds. of concrete in walls and floor, 1,495 sq. ft. of concrete in roof, 1,273 lbs. iron rod, 4-in. channels, sheet iron doors and gates, 10,638 lbs. of galvanized sheet iron distributing troughs.

DAYTON, OHIO.—Bids will be received by the Board of Public Service, W. A. Budroe, Clk., until noon, March 19, for constructing sanitary sewers in District No. 4, to consist of 22,265 lin. ft. of 8-in., 5,555 lin. ft. of 10-in., and 1,100 lin. ft. of 12-in. vitrified pipe sewers, 75 manholes, 40 lamp-holes and 27 flushtanks.

SANDUSKY, OHIO.—The lowest bid opened on March 4 by the Board of Public Service for constructing the Cable Park and Scott St. sewer was submitted by Henry Bros. at $3,516.

FORT WAYNE, IND.—Bids are asked until 7.30 p. m., March 25, by the Board of Public Works, H. W. Becker, Clk., for constructing two vitrified pipe sewers.

DETROIT, MICH.—Bids will be received until March 20 by Frank E. Doremus, City Controller, for $175,000 of sewer and $300,000 of school bonds.

CHICAGO, ILL.—Bids will be received until March 24 by the Board of Inspectors, House of Correction, 26th and California Sts., for furnishing and delivering for the quarter beginning April 1, 1909, sewer pipe that may be needed.

PLYMOUTH WIS.—Bids will be received by C. W. Jackson, City Clk., in May, for laying 16,000 ft. of 6, 8, 10 and 12-in. vitrified pipe sewers. W. G. Kirchoffer is Engr., Madison, Wis.

*GRUNDY CENTER, IOWA.—We are officially advised that bids were received as follows on March 8 by the city for constructing sewers here: M. TSCHIRGI, Dubuque, Iowa, $15,557, (awarded contract); M. Ford, Cedar Rapids, Iowa, $16,957; Peoples Construction Co., Davenport, Iowa, $17,696; I. W. Turner Imp. Co., Des Moines, Iowa, $17,540; Dearborn & Jackson, Cedar Rapids, Iowa, $17,583; E. R. Harding Co., Racine, Wis., $18,605; F. E. Kamaniski, Watertown, Wis., $18,482; N. A. Camery, Harlan, Iowa, $18,459; Union Eng. & Const. Co., Chicago, Ill., $19,332; W. M. Long, Harlan, Iowa, $19,799; Geo. M. King, Des Moines, Iowa, $19,599; W. W. Cooley, Clinton, Iowa, $19,970; G. S. Redmon, $20,298; W. A. Edgar, Cedar Rapids, Iowa, $19,206; Guy E. Smith, Indianola, Iowa, $20,676; Cedar Rapids Const. Co., Cedar Rapids, Iowa, $21,417; H. E. Gardner, Grundy Center, $21,599; J. O. Hughes & Co., F. C. Robinson, $21,436; Wm. Tuny, Joliet, Ill., $21,983; Cook Const. Co., Des Moines, Iowa, $22,400; W. C. Fraser, Rochester, Minn., $22,433; O'Farrall Cont. Co., Dubuque, Iowa, $23,238; L. S. Abbott, Fulton, Ill., $2,633 (septic tank and accessories only). E. A. Crary is Town Engr.

DES MOINES, IOWA.—Bids will be received by the City Council until 10 a. m., March 19, for the construction of a 12-in. vitrified clay pipe sewer in 43d St., from Ingersoll Ave. to Grand Ave.; about 631 lin. ft. of sewer; also for a 10-in. No. 1 vitrified clay pipe sewer, about 1,380 lin. ft. George F. Poorman is City Clk.

WASHINGTON, KAN.—Bids will be received until March 22 by the city for the construction of a sewerage system here. Burns & McDonnell, Scarritt Bldg., Kansas City, Mo., are Engrs.

MARION, KAN.—Bids are asked until 7 p. m., March 22, by Thomas W. Bown, City Clk., for the construction of a septic sewage disposal tank.

UVALDE, TEX.—The city is considering the construction of sewer system.

WAURIKA, OKLA.—The city has voted $8,000 for the extension of the sewerage system.

SAN DIEGO, CAL.—The City Engineer was instructed by the Board of Public Works on March 1 to provide elevations for the extension of the sewer lines in Dale St. and 38th St., from a point 15 ft. south of the south line of Juniper St. to the center line of Juniper St., a distance of 55 ft.

STREETS AND ROADS.

(denotes that this work is advertised in Engineering News.)*

BOSTON, MASS.—Bids were opened on Feb. 24 by Guy C. Emerson, Supt. of Streets, for treating about 400,000 sq. yds of macadam roadways in Jamaica Plain and Dorchester for seven months from March 1, 1909, for the suppression of dust and the preservation of macadam road surfaces with calcium chloride. The contract was awarded to the CALCADE PROCESS CO., 402 Sears Bldg., at 4 cts. per sq. yd.

SYRACUSE, N. Y.—JOHN YOUNG was awarded contract by the city, at $21,325, for repairing 18,000 sq. yds. of asphalt. Henry C. Allen is City Engr.

LITTLE FALLS, N. Y.—Bids are asked until 10 a. m., April 2, for 2,850 sq. yds. of paving on East Main St., and 3,550 sq. yds. of paving on East John St., to be received on bitulithic on concrete base, asphaltic block on concrete base and on any so-called noiseless pavement for which bidder may submit specifications.

ALBANY, N. Y.—Bids were received on March 1 by the Board of Contract and Supply for the improvement of West Larwence St. and paving with macadam as follows: Hudson Valley Concrete Block Co., Albany, $11,065; Morris Kantrowitz, Albany, $10,630 Michael F. Dollard, Albany, $10,990; Frank Besch, Albany, $10,553. It is understood that these bids will be rejected and the work readvertised, the specifications being revised to call for brick pavement instead of macadam. For the improvement of Orange St., between Lark St. and the Northern Boulevard, the following bids were received: Edward F. Dillon, Albany, $6,934; Michael F. Dollard, Albany, $6,787; Mulderry Bros., Albany, $6,516; John M. Holler, Albany, $6,675. Walter Melius is City Engr. Isidore Wachsman is Secy, Bd.

CORNING, N. Y.—McGREEVY, McGUIGAN & BAUM have been awarded contract for 3,600 sq. yds. of brick paving 4 ins. thick, on 6-in. concrete foundation, with 2-in. sand cushion, at $1.79; 1,800 cu. yds. earth excavation at 35 cts.; 4,300 sq. yds. macadam, 6 to 8 ins. thick, at 70 cts.; 2,700 cu. yds. earth excavation, at 35 cts.; 4,100 lin. ft. concrete curbing, at 60 cts., including gutter 18 ins. wide and 8 ins. thick. Total, $13,380. Other bidders were: Stafford & Humphries, McGraw, N. Y., $14,233; P. D. Conley, Ithaca, N. Y., $14,269; D. D. Dugan, Olean, N. Y., $14,665; Costello & Neagle, Elmira, N. Y., $14,696; J. B. Hurley, Fredonia, N. Y., $14,703; Collins & Owens, Utica, N. Y., $14,762; S. C. Bradley, Corning, N. Y., $14,862; John F. Kerwin, New Brunswick, N. J., $15,333; Juniata Paving Co., Harrisburg, Pa., $15,358; Thomson & Matson, Brookville, Iowa, $15,624; S. P. Hull, Cortland, N. Y., $15,853; R. W. Henson, Geneva, N. Y., $15,997.

ROCHESTER, N. Y.—The contract for paving North Goodman St. with brick from Main St. east to Bay St. was awarded on March 8 by the Board of Contract and Supply to the FRANK V. BROTSCH CO., the lowest bidders, at $39,258. The contract was awarded subject to the right of the Rochester Ry. Co. to itself lay that portion of the pavement which it will pay for, between its rails and two feet outside.

BROOKLYN, N. Y.—Bids were received on March 10 as follows by Bird S. Coler, Boro. Pres., for (a) 4,700 cu. yds. of broken trap rock and 1,500 cu. yds. of trap rock screenings, (b) 2,983 and 994 cu. yds. of broken trap rock and screenings, respectively, (c) furnishing and delivering 100,000 sq. ft. of bluestone flagstone, (d) 4,000 and 1,900 cu. yds. of broken trap rock and trap-rock screenings: (a) Jacob E. Conklin, $11,284; Norton & Gorman Co., $12,338; Bonnacci & Vincelli, $12,338; Manhattan Trap Rock Co., $11,780; Robert Carter & Co., Inc., $11,346; Clinton Point Stone Co., $10,044; James Quinn Contracting Co., $12,224; (b) Clinton Point Stone Co., $6,283; Jacob E. Conklin, $7,158; (c) Donald & Pound, $21,000; Norton-Gorman Contracting Co., $19,500; (d) Jacob E. Conklin, $9,145; Norton & Gorman Co., $11,682; Bonnacci & Vincelli, $11,682; Manhattan Trap Rock Co., $10,325; Robert Carter & Co., Inc., $10,797; Clinton Point Stone Co., $9,617; James Quinn Contracting Co., $11,633.

BROOKLYN, N. Y.—Bids were received as follows on March 10 by Bird S. Coler, Boro. Pres., for regulating and repaving with asphalt on a concrete foundation the roadway of Fulton St., between Hanover Pl. and Flatbush Ave., and Flatbush Ave., between Fulton St. and Fifth Ave. (both sides) and the east side of Flatbush Ave., between Fifth Ave. and Plaza St., together with all work incidental thereto: Warren Asphalt Paving Co., 253 Broadway, New York, $54,309; Brooklyn Alcatraz Co., $59,467; Cranford Co., $58,303; Barber Asphalt Paving Co., $54,410; Uvalde Asphalt Paving Co., $70,433.

NEW YORK, N. Y.—Bids were received as follows on March 10 by John F. Ahearn, Pres. Boro. of Manhattan, for widening the roadway and repaving with sheet asphalt pavement on a concrete foundation the widened roadway of Fifth Ave., from north side of 25th St. to the south side of 47th St., except between 40th and 42nd Sts.: Sicilian Asphalt Paving Co., $40,225; Uvalde Asphalt Paving Co., $49,592; Barber Asphalt Paving Co., $52,997.

Bids were also received for (a) repairing asphalt block pavement in the Borough of Manhattan, and (b) regulating, grading and paving with asphalt block pavement on a concrete foundation the roadway of Tenth Ave., from Academy St. to Broadway: (a) Harlem Contracting Co., $35,698; Barber Asphalt Paving Co., $35,480; (b) Sicilian Asphalt Paving Co., $126,981; Harlem Contracting Co., $75,864; Barber Asphalt Paving Co., $79,925.

ASBURY PARK, N. J.—The Common Council has awarded contract for vitrified brick pavement on Springwood Ave. to B. F. SWEETEN & SON, of Camden, N. J., about 13,500 sq. yds., with Glen-Gery brick on concrete, at $2.29 per sq. yd., and 2,850 lin. ft. curb reset, at 45 cts.

JERSEY CITY, N. J.—The Street and Water Board on March 8 awarded to VAN KEUREN & SONS, Jersey City, the contract for the Mallory Ave. improvement at 74.9% of the standard cost of labor and material.

HENRY BYRNE secured the contract for the improvement of Rose Ave. at 85% of the standard cost.

PITTSBURG, PA.—Bids will be received by R. J. Cunningham, County Controller, until noon, March 23, for furnishing 70,000 tons, more or less, of ballast and screenings for the various improved roads as per schedule and specifications on file in the office of George T. Barnsley, Ch. Road Engr., Court-House, bids to be made per ton, railroad weight, f. o. b. cars destination, and as per schedule furnished; also for hauling ballast and screenings from railroad stations and sidings to points on various improved roads in Allegheny County.

ELIZABETH, PA.—The contract for grading, sewering and paving Locust St., from State to Fourth Sts., was awarded on March 3 by the city to MAYNARD & FLYNN, of South Side, Pittsburg, at $10,501. Work will commence immediately.

ETNA (Allegheny post-office), PA.—Bids will be received by J. C. Armstrong, Boro. Clk., until 5 p. m., March 22, for grading, paving and curbing High St., from Butler St. to the borough line with brick and block stone.

*INGRAM, PA.—Bids will be received by H. H. Hainer, Borough Clk., 54 McKee St., for grading, curbing and paving Prospect Ave., from Berry St. to a point about 2,050 ft. west, opposite Lot No. 7 in the Mrs. E. M. Gordon plan.

BALTIMORE, MD.—B. T. Fendall, City Engr., has instructed P. REDDINGTON'S SONS, 321 St. Paul St., Baltimore, to begin vitrified brick paving on Fairmount Ave., between Lakewood Ave. and eastern city limits.

J. A. KINLEIN & CO. have been awarded contract for paving the mall in Patterson Park and for constructing paths in Druid Hill Park. The contract for bricks for the mall was given to the HUDSON CEMENT & SUPPLY CO., at $16.50 per M.

LOCH RAVEN, MD.—The Maryland School for Boys has awarded contract to ARTHUR L. SHREEVE & CO., 331 Dolphin St., for road construction, at $10,470.

ELKTON, MD.—Cecil County has awarded contract to the CECIL CONSTRUCTION CO., of Elkton, for constructing a stone road from Cecilton to Delaware State line, about two miles, at $17,841, and also for stone road from Chesapeake City to St. Augustine, about two miles, at $13,446.

ROCKVILLE, MD.—Bids are asked until noon, March 30, by the County Commissioners, Robert G. Hilton, Clk., for grading and macadamizing about ¾ of a mile of road.

*FREDERICK, MD.—Bids will be received by the Mayor and Board of Aldermen until 10 a. m., April 5, for furnishing all material and labor for laying approximately 10,390 sq. yds. of vitrified fire clay block paving on concrete foundation; furnishing and setting 5,060 lin. ft. of granite curb, and resetting 360 lin. ft. of old granite curb; also furnishing all material and labor for laying approximately 1,370 lin. ft. of 24-in. vitrified fire clay pipe sewer, 1,020 lin. ft. 6-in. house connections, 490 lin. ft. 12-in. catch basin connections, and the construction of 19 catch basins and four manholes. Westinghouse, Church, Kerr & Co., are Engrs.

*PORTSMOUTH, VA.—Bids will be received by the Street Committee at the office of City Clerk, Portsmouth, until 8 p. m., March 23, for one new 10-ton steam road roller, delivered, started and operated for ten days on streets of city.

BENWOOD, W. VA.—The city has awarded contract to DAY & ARCHER, of Benwood, for brick street paving, including about 1,500 sq. yds. of paving and 1,000 lin. ft. of wood curb on 48th St., and about 1,500 sq. yds. of paving partly on 17th St. and partly on Ashland Ave. John Blake is Chn. Com. on Sts., Alley and Grades.

PHILIPPI, W. VA.—Bids are asked until noon, March 25, by L. D. Robinson, City Clk., for grading, paving and curbing streets here. There will be about 4,500 cu. yds. of grading; 3,000 lin. ft. of stone curbing, 3,000 lin. ft. of concrete curbing, and 10,000 sq. yds. of vitrified brick paving. Separate bids will be taken for the curbing.

CHARLOTTE, N. C.—The city has awarded contract to the ATLANTIC BITULITHIC CO., Mutual Bldg., Richmond, Va., for paving East Ave., between College and McDowell Sts., with bitulithic, at about $30,000, of which city will pay $17,000.

GRAHAM, N. C.—It was erroneously reported last week that contract was let to T. D. Scruggs for road work in Alamance County. Bids are asked for this work until April 5, as advertised in Engineering News.

MOORESVILLE, N. C.—The Iredell County Commissioners, N. B. Mills, Statesville, Chn., have awarded contract to JOHNSTON & CO., of Charlotte, N. C., for the construction of four miles of macadam road from Mooresville to the Catawba River. C. M. Miller, Salisbury, N. C., is Engr.

THOMASVILLE, GA.—J. C. Strawbridge, of Philadelphia, has awarded a contract to W. H. BIBB, JR., to clay Broad St., where the macadamized road ends, to the entrance of the Country Club, at Glen Arven. Work will be commenced at once.

HUNTSVILLE, ALA.—The city has awarded contract to the MINERAL RUBBER PAVING CO., Memphis, Tenn., for paving Franklin St. with asphalt, at $1.82 per sq. yd. for asphalt, $2 per yd. for brick gutters and 52½ cts. per ft. for curbing.

LAFAYETTE, ALA.—Bids are asked until April 5 by A. L. Driver, Jr., Judge of Probate, for grading West Point public road between Lafayette and Lanett.

OXFORD, MISS.—LIGON & CO., Dublin, Ga., have been awarded contract for constructing concrete sidewalks and graveled or macadamized streets.

FRANKLIN, LA.—The Council has received bids for paving and curbing the main street of the town. Six bids were submitted. The contract was awarded to GAILY & CLARK, of Alexandria, the lowest bidders. The work calls for 28,500 sq. ft. of cement sidewalks and 5,200 lin. ft. of brick curbing.

MEMPHIS, TENN.—The city has awarded contract to the MINERAL RUBBER PAVING CO., Memphis, for asphalt paving around Forrest Park and on Manassas St., at about $10,000.

LOUISVILLE, KY.—The Board of Public Works on March 9 awarded sidewalk contracts aggregating $20,000. The location of the new work and the names of the contractors follow: STAEBLER & McFARLAND, both sides of Campbell St., between Walnut and Gray Sts.; south side Grayson St., between Eighth and West Sts.; west side of 26th St., between Duncan and Alford Sts.; north side of Duncan St., between 18th and 19th Sts.; south side of Cawthon St., between Seventh and Eighth Sts.; south side of Walnut St., between 20th and 22nd Sts.; both sides of Marshall St., between Campbell and Wenzel Sts.; south side of Story Ave., between Frankfort and Letterie Sts.; north side of Story Ave., between Cabel and Webster Sts.; east side of 15th St., between Broadway and first alley north. L. R. FIGG, east side of 15th St., from Rowan to first alley north and south; north side of Duncan St., between 20th and 21st Sts.; both sides of Madison St., between Eleventh and 13th St.; both sides of Oak St., between 12th and 13th Sts., and between 13th and 18th Sts.

TOLEDO, OHIO.—Bids will be received by the Auditor of Lucas County, until 10 a. m., March 29, for all labor and materials required for the repair of Stickney Ave. stone road No. 14 from the city line to a point 2,574 ft. west of city line, Washington Township.

JEFFERSON, OHIO.—Bids will be received by the County Auditor until 1 p. m., March 22, for grading and macadamizing 3.8 miles of road.

BOWLING GREEN, OHIO.—Bids will be received by F. W. Toan, County Audr., until 1 p. m., April 5, for grading, draining and macadamizing various public highways.

YOUNGSTOWN, OHIO.—Bids will be received by the Commissioners of Road District No. 1, of Mahoning County, Dollar Bank Building, Youngstown, until 1.30 p. m. March 20, for furnishing labor and material for the improvement by turnpiking of the north and south road in Austintown Township, beginning at the Canfield and Austintown Township line and extending north to the Trumbell-Mahoning county line, a distance of 26,700 ft. Frank Agnew is Secy.

OTTAWA, OHIO.—Bids are asked by the County Commissioners until noon, March 31, for constructing various stone roads in Palmer, Monroe and Van Buren Townships. J. T. Maidlow is County Surv. and Engr.

WILLIAMSPORT, IND.—Contracts for the construction of three gravel roads in Warren County have been let to HOLT & MILROY, of Frankfort, Ind., at $15,146.

INDIANAPOLIS, IND.—MODDLIN BROS., of Marion, Ind., have been awarded a contract to construct a stone road in Marion County.

KOKOMO, IND.—Bids are asked by the Commissioners of Howard County until 10 a. m., April 7, for the construction of a gravel road in Clay Township. A. B. Esterling is County Audr.

DETROIT, MICH.—Contracts for paving with wood blocks on concrete have been awarded by the Board of Public Works as follows: Alexandrine St., JULIUS PORATH, $3,323, or $1.83 per sq. yd.; Beaufait St., FERD. PORATH & SON, $11,244, or $1.80 per yd.; Harper St., JULIUS PORATH, $10,619, or $1.75 per yd.; Marantette St., J. A. MERCIER, $8,898, or $1.96 per yd.; Sheridan St., THOMAS E. CURRIE, $18,592, or $1.83 per yd.

LAKEMILLS, WIS.—Bids will be received for the laying of about 23,000 sq. yds. of tar or asphalt macadam and about 6,000 ft. of curb and gutter on about April 20. W. G. Kirchoffer is Engr., Madison, Wis.

ST. PAUL, MINN.—The Board of Public Works on March 4 rejected all bids for grading Vandalia St., between University and St. Anthony Aves., and Cretin Ave., between St. Anthony and Marshall Aves., as excessive, the lowest being $9,693. The City Engineer's estimate on the work was $9,000. New bids will be asked.

The contract for grading an alley in Block No. 3, Summit Park addition, was awarded to FIELDING & SHEPLEY, at $3,088.

GREENVILLE, TEX.—The Special Committee appointed by the Greenville Commercial Club has decided to expend about $10,000 for constructing roads into Greenville.

HONEY GROVES, TEX.—The city has voted $7,000 of bonds for street improvements here. S. H. Gardner is Mayor.

SEATTLE, WASH.—Bids were received on March 5 by the Department of Public Works for paving Minor Ave., North and other streets (a) with granite curb, (b) with armored concrete: BARBER ASPHALT PAVING CO., White Bldg., Seattle, (a) $138,381 (awarded contract, (b) $137,018; Independent Asphalt Paving Co., Third and Cherry Sts., Seattle, (a) $150,337, (b) $148,917; T. J. McHugh, 1702 Queen Anne Ave., Seattle, (a) $147,405, (b) $145,843; International Contract Co., 501 Central Bldg., Seattle, (a) $162,671, (b) $161,251; Hans Pederson, Alaska Bldg., Seattle, (a) $166,797, (b) $165,093; C. W. Colt & Co., Davis Block, Seattle, (a) $158,457, (b) $154,980. R. H. Thomson is City Engr. Itemized bids are given under Contract Prices.

PORTLAND, ORE.—For the seventh time bids for the improvement of East Third St., between Oak St. and Hawthorne Ave., were rejected by the Street Committee of the City Executive Board on March 4. The Board was recommended to order the City Auditor to readvertise for bids. The Pacific Bridge Co. was the only bidder, at 5% more than the estimates of the City Engineer.

LOS ANGELES, CAL.—Bids are asked until 2 p. m., March 22, by the County Supervisors, C. G. Keyes, Clk., for labor and material for excavation and fills for, and constructing certain cement cribs, gutters and wooden catch-basins on California Ave. and the Los Angeles and Santa Ana Road.

MANUFACTURING PLANTS.

(denotes that this work is advertised in Engineering News.)*

CAMBRIDGE, MASS.—The Carter Ink Co. has contracted with the ABERTHAW CONSTRUCTION CO., 8 Beacon St., Boston, for the erection of a reinforced-concrete factory building to be erected on First St., Cambridge. The design and equipment of the factory are after the plans of Densmore & LeClear, of Boston. The building will be of reinforced concrete throughout, absolutely fireproof and first-class in all details. The work will be begun immediately.

NORTH ADAMS, MASS.—WHITNEY BROS. have been awarded contract by the Greylock Mfg. Co., of Greylock, to build the big addition to their mill, which will double the capacity of the plant. The contract amounts to about $100,000 and calls for the completion of the buildings by Aug. 1. The weave shed will be 200 × 168 ft. and one story with basement. The main spinning room will be 103 × 124 ft. and four stories high, with an ell two stories 40 × 50 ft. The engine room will be 40 × 50 ft. and two stories. The foundations are to be of concrete and walls of brick, with the whole construction of the heaviest of mill work. Contracts for the erection of 40 or 50 tenements for the use of the mill employees will also be let.

BRIDGEPORT, CONN.—The Harvey Hubbell Co., manufacturers of machine screws, tapping machines, riveting machines, screw-slotting machines, tools and electrical specialties, has awarded to the EASTERN CONSTRUCTION CO., of Boston, the contract for the construction of a factory at the junction of Railroad and Bostwick Aves. The structure will be a 5-story building, 65 × 165 ft., of reinforced concrete. Cost, about $75,000.

Hincks & Johnson are planning to remodel their factory building west of the firm's structure at the corner of Broad and Cannon Sts. on the south side of Cannon St., for Joseph L. Bloomer, who will utilize the ground floor as a motor cycle garage and the second story for manufacture of Liberty bicycles.

Vincent Bros. are contemplating the erection of a business block on State St., west of Colorado Ave., where property was recently purchased for the structure. S. E. Vincent, who has charge of the arrangements for the building, is having plans prepared providing for stores on the ground floor and living apartments above.

FORT H. G. WRIGHT (New London, Conn., post-office), N. Y.—The following bids were opened on March 1 for the construction of a bakery at Fort H. G. Wright.: Item (a) construction proper; (b) plumbing; (c) heating; (d) electric wiring; (e) electric fixtures. M. A. Ryan, Inc., New York, item (a) $7,700, (b) $500, (c) $650); William H. Ahern, New London, Conn., items (b) and (c) $1,395; William Hamilton, Des Moines, Iowa, item (a) $8,225; Fred. A. Eldredge, Westerly, R. I., item (a) $9,624, (b) $693, (c) $473, (d) $209; Walworth Mfg. Co., Boston, Mass., item (c) $482; Michael O'Connell, New London, Conn., item (a) $9,600, (b) and (c) $1,250, (d) and (e) $250; Alfred Farley, Plattsburg, N. Y., item (a) $7,570, (b) $595, (c) $450, (d) $150, (e) 100; Charles E. Currie & Co., Boston, Mass., item (a) 8,537; George A. Minault, New London, Conn., item (a) $8,347, (b) and (c) $1,198; Ford, Keys & Co., New London, item (b) $785.28, (c) $599; Charles H. Peckworth, New York, item (a) $8,100; Warner & Rittenhouse, Washington, D. C., item (b) $787; Frank J. Eisenger, New York, item (c) $429; The Mallory Co., New London, Conn., item (b) $625, (c) $425, (d) and (e) $425; J. Franklin Edgecomb, Groton, Conn., item (a) $7,110, (b) and (c) $1,398, (d) and (e) $218.

AVIS, PA.—The old repair shops of the New York Central & Hudson River R. R. Co. at Jersey Shore are being demolished and such of the material as can be made available will be used in new and larger buildings to be erected at Avis. These will be equipped with modern machinery and appliances. The work is to begin April 1.

LOCK HAVEN, PA.—The Clinton Ice & Coal Co., of this city, has awarded the contract for the ice making machinery for the new ice manufacturing plant here to the FRICK CO., Fulton Bldg., Pittsburg, Pa. The plant will have a daily capacity of 200 tons, and will cost about $30,000. It must be completed and ready to turn over to the owners on May 15, 1909. The new plant will be built of brick and terra cotta block, and in addition to having the ice making machinery, will have a cold storage plant. The buildings will be built by the MILLER CONSTRUCTION CO., of this city.

ROANOKE, VA.—J. H. Taylor and W. E. Howery on March 5 announced they would at once erect a roller mill here, with a capacity of 150 barrels of flour per day.

MARION, N. C.—D. D. Little, of Spartanburg, S. C., Carroll Baldwin, of New York, and Marion parties will build a cotton mill in this city. They will expend $200,000 for a plant to manufacture fine cotton cloth, expecting to have it ready for operation by Sept. 1. Mr. Little will be president and general manager.

ROCKINGHAM, N. C.—Leak, Wall & McRae, proprietors of the Midway Mills, Rockingham, N. C., have decided to improve their plant. They have begun an enlargement of the buildings and will install considerable machinery. This latter has not been announced. About $8,000 will be the cost of all the betterments. GEORGE STEPHENSON & SON, of Rockingham, have the contract for the building. The mill now operates 8,000 ring spindles and 200 looms, producing ticking, cotton felts and mattresses.

BALL GROUND, GA.—The Ball Ground Cotton Mills have reorganized and elected Frederick A. Abbott, Pres., Lowry Bolling, Vice-Pres., and J. E. Farmer, Treas. It will resume construction of plant previously announced, including a 2-story, 75 × 250-ft. main building, a power-house, a warehouse, etc. Previous reports stated the equipment will be 10,000 spindles and 300 looms for manufacturing duck, etc.

SHREVEPORT, LA.—The Consumers Ice & Cold Storage Co. has filed articles of incorporation with the following officers and directors: F. A. Tusten, Pres.; Andraw Kuhn, Vice-Pres.; Charles L. Horn, Secy.-Treas.; C. Boetz, C. C. Herndon, John Kuhn, J. W. Chamberlain, F. C. Scheer, Hugo Hoyer, R. C. Friend, P. P. Keith, Meyer Benson, M. Benson, T. L. Stringfellow, S. J. Harmon, J. C. Mahlen, M. M. Durant, C. Crain, E. W. Hamiter, F. Serwich, J. T. Hegens, E. A. Renfroe, D. W. Charlton, Nick James, M. Kirsch, S. W. Tullos and D. Ricou, all of Shreveport. The capital stock of the company is $50,000.

SHELBYVILLE, IND.—The Shelbyville Glove Co. is planning to erect a factory in this city. The citizens Industrial Club has charge of the matter.

FORT WAYNE, IND.—The Fort Wayne Electric Works has let a contract to HENRY J. KAISER for the construction of an additional story on the laboratory building.

DETROIT, MICH.—Chittenden & Kotting, Archs., Penobscot Bldg., Detroit, have prepared plans for an $11,000 addition to the Larned, Carter & Co. factory at Eighth and Howard Sts., some of the contracts for which have already been let, the building permit having been taken out this week. The building is to be 50 × 60 ft., four stories high with basement. HENRY F. GEORGE has the mason contract and iron work; J. H. A. HABERKORN the carpenter contract; BATCHELDER, WASMUND & CO. the cut stone, and WILLIAM WRIGHT the painting and glazing.

KANKAKEE, ILL.—The Paramount Knitting Co. will build an addition to the plant. The new building will be an extension of the last structure erected, which now extends from East Ave. west through the alley at the rear and 7 ft. on the next lot. The purpose is to add 138 ft. of factory construction, of cement, the number of stories yet to be determined. The main building is three stories and a basement. The work will be done this season.

SUPERIOR, WIS.—SCHMIDT & HILL have been awarded the contract by the Great Northern Ry. Co. for the completion of the car repair shops started in the fall of 1907, but never completed. G. H. Emerson, St. Paul, Minn., is Supt. M. P.

LOS ANGELES, CAL.—The California Glass and Soda Mfg. Co. has purchased from the Builders' Supply Co., of Los Angeles an irregular lot, approximately five acres, situated near Ave. 26, between Andrews St. and Livingston Boulevard. The purchaser intends to improve with a glass factory for the manufacture of window glass, bottles, jars, etc. The estimated cost of buildings and improvements is $75,000.

YARMOUTH, N. S.—H. B. Cann, Pres. of the New Burrell-Johnson Iron Co., has advised us that it is the intention of the company to rebuild the machine shops destroyed by fire recently. It will be a few weeks before the directors decide definitely on plans for the new buildings, whether of brick or concrete.

VANCOUVER, B. C.—The announcement is made that the Canadian Pacific Ry. Co. will erect shops here for building cars and locomotives. F. F. Busteed, Vancouver, B. C., is interested.

MISCELLANEOUS CONTRACTS.

U. S. RECLAMATION SERVICE.—Items regarding irrigation, canal projects, etc., will be found under Water Supply—Irrigation.

CHANNEL.—Chicago, Ill.—See item under Bridges.

TELEPHONES.—Winnipeg, Man.—See item under Light and Power Plants.

*GRADE CROSSINGS.—Philadelphia, Pa.—See item under Railways—Philadelphia & Reading.

*BREAKWATER.—Buffalo, N. Y.—Bids are asked until 11 a. m., April 15, by Col. W. L. Fisk, Corps Engrs., U. S. A., Buffalo, for constructing a stone breakwater in Buffalo Harbor.

*PIER REPAIR.—Manistee, Mich.—Bids are asked until 3 p. m., April 14, by Major Charles Keller, Corps Engrs., U. S. A., 57 Park St., Grand Rapids, for repairing the North Pier at Manistee.

DREDGING.—Toronto, Ont.—Bids are asked until noon, March 29, by C. W. Postlethwaite, Harbor Master, Board of Trade Bldg., Toronto, for dredging required in Toronto Harbor for this season.

BUOY SERVICE.—Mobile, Ala.—Bids are asked until noon, April 10, by the Light-House Inspector, New Orleans, La., for transporting supplies and caring for the Mobile Ship Channel lights, Ala.

CANAL SUPPLIES.—Montreal, Que.—Bids are asked by Ernest Marcau, Supt. Engr. of Canals, Province of Quebec, 2 Place d'Arme, Montreal, until 4 p. m., March 29, for the supplies required on the canals of this Division for the fiscal year 1909-10.

CEMENT.—Brandon, Man.—Bids will be received by Harry Brown, City Clerk, until 4 p. m., April 16, for the supply of 2,000 bbls., more or less, of Portland cement for the city. W. H. Shillinglaw is City Engr.

*LUMBER.—Nashville, Tenn.—Bids are asked until 11 a. m., April 17, by Major William W. Harts, Corps Engrs., U. S. A., Nashville, for furnishing and delivering about 700,000 ft. B. M., long-leaf yellow pine lumber.

*LOCK GATES.—Nashville, Tenn.—Bids are asked until 11 a. m., April 19, by Major William W. Harts, Corps Engrs., U. S. A., Nashville, for constructing and erecting three sets of steel lock gates for Riverton Lock, Tennessee River, Ala.

RETAINING WALL.—Rockville, Conn.—Plans and specifications are being prepared by the City Engineer for the building of a 600-ft. retaining wall on His[illegible], for which the city has appropriated $[illegible]. The wall will range in height from 9 [illegible] ft.

DITCH.—Olivia, Minn.—Bi[illegible]ere received on March by J. L. Johnso[illegible]unty Audr., for constructing Judicial D[illegible] No. 3, comprising about 33,165 cu. y[illegible]rth excavation. Estimated cost, $3,[illegible]ontract has been let to G. C. GREEN, [illegible]ncoe, Minn.

TIMBER.—Fort William, [illegible]—Bids are asked until 4.30 p. m., M[illegible]25, by Napoleon Tesser, Secy. Dept. [illegible]Wks., Ottawa, Ont., for the supply [illegible]to be delivered at the mouth of th[illegible]ion River, Ont. W. R. Merrick is R[illegible]ngr., Fort William.

*DUMP SCOW.—Providence, [illegible]—Bids are asked until 11 a. m., April 5, [illegible]Walter P. Slade, Comr. of Public Work[illegible] the construction of a dump scow [illegible]used for conveying the residue from th[illegible]recipitation tanks at Field's Point. Ot[illegible]rlapp is City Engr.

*FENCE.—Hull, Mass.—Bids [illegible]sked until 10 a. m., April 14, by Cap[illegible]H. Rolfe, Constr. Q. M., U. S. A., 260[illegible]mer St., Boston, Mass., for furnishing [illegible]abor and material and constructing a [illegible]en wire fence around the U. S. Military [illegible]servation of Fort Revere, Hull.

*DREDGING.—Geneseo, Ill.—Bi[illegible]re asked until 2 p. m., March 26, by the [illegible]mmissioners of the Green River Special [illegible]age District in Henry and Bureau [illegible]ties for cleaning out the Harrison Lat[illegible]ditch, requiring the removal of approxim[illegible]y 15,709 cu. yds. of material.

DITCH.—Calamus, Iowa.—Bids [illegible]were received on March 8 by the Board [illegible]of County Commissioners R. C. Hart, Coun[illegible]Surv., at Clinton, Iowa, for constructing a [illegible]ditch north of Calamus. Estimated quanti[illegible]103,000 cu. yds. Contract has been let to [illegible]FRED. M. CRANE CO., Omaha, Neb., at $14,[illegible]

DRAINS.—South Bend, Ind.—Bid[illegible]are asked until 10 a. m., March 27, by H. [illegible]Miller, Constr. Comr., for construction [illegible]of drains and ditches in St. Joseph County. The work to consist of construction of a main dredge ditch and lateral ditches Nos. 1 to 20, both inclusive. Ralph E. Keller is Engr.

CANAL PROTECTION.—St. Catharines, Ont.—Bids are asked until 4 p. m., March 23, by L. K. Jones, Secy. Dept. of Railways and Canals, Ottawa, for stone protection on Summit Level, Welland Canal. Plans may be seen at office of Superintending Engineer, Welland Canal, St. Catharines.

*DITCH—Jeddo, Pa.—Bids are asked until 2 p. m., April 1, by the B. G. Markle Co., Jeddo, for the construction of about four miles of drainage ditch at Highland No. 6 Colliery, belonging to the company. The quantity of material to be moved is about 47,000 cu. yds., largely earth excavation.

RETAINING WALL.—Pittsburg, Pa.—Bids are asked until 10.30 a. m., March 19, by the City Controller, for constructing a reinforced concrete retaining wall and driveway at Engine House No. 37, Rebecca St., near Colombo, Pittsburg. George W. Guthrie is Mayor; Edward G. Lang, Dir. Dept. of Pub. Safety.

DITCH.—St. Paul, Minn.—Bids were received by George A. Ralph, State Drainage Engr., on March 8, for the contract for Judicial Ditch No. 1, in Steele and Waseca Counties. Approximate cost of the ditch is $40,000. A. C. DAVISSON, of Rochester, Ind., has secured the contract for 592,000 cu. yds. of work.

WHARF.—Beaumont, Tex.—Bids are asked by J. G. Sutton, City Secy., until 10 a. m., April 6, for the construction of a wharf about 700 ft. long on the river front from the western edge of Pearl St. to the eastern boundary line of the old city of Beaumont. Approximate cost of construction, $41,000. C. L. Scherer, City Engr.

*LOCK GATES, ETC.—Washington, D. C.—Bids are asked by Major Jay J. Morrow, Corps Engrs., U. S. A., until noon, April 12, for furnishing and installing one set lock gates with operating mechanism and eight curtain gates with operating mechanism, in bridge at inlet to Tidal Basin, Potomac Park, Washington, D. C.

DITCH.—Sioux City, Iowa.—Bids were received by E. E. Hosmer, County Audr., on March 9 for constructing the Hackley lateral ditch; total length, about four miles. The contract has been awarded to FRED M. CRANE, of Omaha, Neb., at 13.7 cts. per cu. yd. Total cost, $6,000. No Engineer has been appointed yet to take charge of work.

DRAINS.—Atkinson, Ill.—Bids were received on March 6 by the Commissioners of Drainage Union District No. 1, towns of Atkinson and Alba, Henry County, for constructing drains for 38,380 ft. tile ditches. Tile work was let to NATIONAL DRAIN TILE CO., of Streator, Ill. Cost, $15,000. H. E. Reeves is Engr., Atkinson; Edward Nowers, Atkinson, is Comr.

PILE REVETMENT.—North Chicago, Ill.—Bids were received as follows on March 10 at the Bureau of Navigation, Navy Department, Washington, for the construction of a pile revetment at the Naval Training Station, Great Lakes, North Chicago, Ill.: Edward Grillen Dock, Dredge & Construction Co., Racine, Wis., $26,660; Great Lakes Dredging & Dock Co., Chicago, $27,950; Standard Construction Co., Chicago, $23,000.

STONE.—Grand Rapids, Mich.—Bids were received as follows by Col. M. B. Adams, Corps Engrs., U. S. A., until 3 p. m., March 15, for furnishing stone for pier filling at (a) St. Joseph and (b) South Haven Harbors, Mich.: The Green Stone & Quarrying Co., Sawyer, Wis., (a) [illegible]2,714; Thomas B. Smith, Sturgeon Bay, W[illegible] (a) $2,955, (b) $3,599; Bennett-Schnerb[illegible] Co., Muskegon, Mich., (a) $3,042, (b) [illegible]3,780; Great Lakes Dredge & Dock Co., [illegible]Chicago, Ill., (a) $3,962, (b) $4,170.

DREDGING.—Norfolk, Va.—Bids [illegible]re received as follows on March 13 at th[illegible] office of the Bureau of Yards and Docks, Navy Dept., Washington, for (a) dredging [illegible] Norfolk, Va., and (b) erection of w[illegible]arves: William L. Miller, 19 Milk St., [illegible]oston,

Mass., (b) $... 9; Atlantic Dredging Co., Franklin Bank ... dg., Philadelphia, (a) $11,- 804, (b) $6,... Coastwise Dredging Co., Chamber of ... merce Bldg., Norfolk, Va., (a) $10,230. ... 076, (b) $7,000; Norfolk Dredging Co., ... 7 Water St., Norfolk, Va., (a) $19,750. $... 00, (b) $9,000.

WIRELESS ...ATION.—Washington, D. C. —The Navy ... artment has awarded to the NATIONAL ... CTRIC SIGNAL CO., Farm- ers' Bank Bl... Pittsburg, Pa., the contract for the inst... ion of a wireless station at the Washing... Navy Yard at $182,600. The station is to ... sist of a steel mast 600 ft. high, concre... operating and power-houses containing ... igh-power station, 100-KW., and quarters ... four men. The contract also includes fur... ishing two 10-KW. stations for wireless tele... aphy and two wireless tele- phone station... on two ships of the Navy.

RETAINING ... WALL.—Columbus, Ohio.— Bids are ask... by the Board of Public Ser- vice, Columb... until noon, March 31, for constructing ... a concrete retaining wall around the ... ttling basins of the sewage purification ... ork adjacent to the Scioto River, about ... mile south of Frank Road, in Franklin ... Township, Franklin County, Ohio. Work ... consists of 860 cu. yds. excava- ting; 765 cu... yds. loam; one acre of seed- ing; 220 sq. ... yds. sodding; 800 cu. yds. con- crete; one ton ... of twisted steel rods. Henry Metzel is Ch... Engr., Bd. Pub. Service; Ed- ward W. Hirsch, Secy.

PIER REPAIR, ETC.—Baltimore, Md.— Bids were received as follows on March 10 by the Board of Awards, for the repair of the west end of center pier, back basin, and the west bulkhead of Block St., together with the construction of a small pile and timber pier: (a) for labor, pay-roll plus; (b) ma- terials, cost plus; (c) tools, pay-roll plus; (d) pile driver per day; (e) deck scow per day: Bernard Rolf, (a) 7.33%, (b) 7.33%, (c) 7.33%, (d) $7.33, (e) $7.33; Sanford & Brooks, 15 South St., (a) 9%, (b) 5%, (c) 2%, (d) $9, (e) $6; South Baltimore Con- struction Co., (a) 8%, (b) 2%, (c) 2%, (d) $5.50, (e) $3; McLean Contracting Co., Mary- land Trust Bldg., (a) 10%, (b) 10%, (c) 10%, (d) $14, (e) $5. Oscar F. Lackey is Harbor Engr.

REPAIRING DIKES, ETC.—Savannah, Ga. —Bids were received by Col. Dan C. King- man, Corps Engrs., U. S. A., on March 5 for raising and repairing dikes and training walls in Savannah Harbor. The bids re- ceived on 45,000 tons of stone were as fol- lows: (a) rate per ton, (b) total: Roderick G. Ross, Jacksonville, Fla., (a) $2.07, (b) $93,150; George M. Gadsden, Savannah, Ga., (a) $2.19, (b) $98,550; Atlantic Dredging Co., John L. Grim, Pres., Philadelphia, Pa., (a) $2.444, (b) $109,980; George M. Gads- den, Savannah, Ga., (a) $2.09, (b) $94,050; Blackstaff Engineering Co., Philadelphia, Pa., (a) $2.34, (b) $105,300; Simons-May- rant Company, J. A. Hertz, Pres., S. Lewis Simons, Treas., Charleston, S. C., (a) $2.48, (b) $111,600. Original estimate, $2.25 per ton of 2,000 lbs. Amount available, $187,000. Bid of Roderick G. Ross, of Jacksonville, Fla., recommended for acceptance.

PIER, ETC.—New York, N. Y.—Bids were received as follows on March 12 by Allen N. Spooner, Comr. Dept. of Docks and Fer- ries, for Contract No. 1158—(a) furnishing all the labor and materials required for pre- paring and refendering Pier No. 53, North River, Boro. of Manhattan, and (b) preparing foundations for street front of bulkhead building and for preparing for building freight shed on Pier No. 53, North River, near the foot of Little West Twelfth St., with lateral extension on the adjacent bulk- head platform; (c) total: McHarg-Barton Co., 165 Broadway, (a) $35,000, (b) $212,300, (c) $247,300; Post & McGore, 44 East 23d St., (a) $25,300, (b) $253,400, (c) $278,700; Maryland Steel Co., 71 Broadway, (a) $26,- 900, (b) $223,790, (c) $250,690; Merrill- Ruckgaber-Fraser Co., 50 Church St., (a) $33,000, (b) $250,300, (c) $283,300; Cooper & Evans and Grant Roher, 220 Broadway (a) $31,233, (b) $250,976, (c) $282,209; Charles Meade & Sons, 299 Broadway, (a) $31,000, (b) $250,000, (c) $281,000; N. Y. State Construction Co., 80 Broad St., (a) $20,685, (b) $243,711, (c) $269,796; R. J. & J. H. Staats, 29 Broadway, (a) $30,000, (b) $239,300, (c) $269,300; North Eastern Con- struction Co., 225 Fifth Ave., (a) $28,900, (b) $221,750, (c) $250,650; Phoenix Con- struction Co., 41 Park Row, (a) $44,000, (b) $276,579, (c) $320,579; George B. Spearin, (a) $31,150, (b) $261,392, (c) $291,542; Snare & Triest, 143 Liberty St., (a) $24,400, (b) $242,400, (c) $256,800.

MONUMENTS.—Indianapolis, Ind.—The fol- lowing bids were received by the Commis- sioner for Marking Graves of Confederate Dead, War Dept., Washington, D. C., for the construction of monuments in the con- federate section of the Greenlawn Cemetery, Indianapolis, Ind., and at North Alton, Ill.: Indianapolis—Co-operative Granite Co., In- dianapolis, Ind., $6,000, eight months; Har- rison Granite Co., New York, $6,000, five months; John N. Huff, Indianapolis, Ind., $5,780, twelve months; Charles G. Blake & Co., Chicago, Ill., $6,000, six months; Van Amringe Granite Co., Boston, $6,000, six months; McDonald & Son, Buffalo, N. Y., $6,000, six months; John Crawford & Son, Buffalo, N. Y., $6,000, six months; M. J. Falvey, Washington, D. C., $6,000, twelve months; Pyle Granite Co., Washington, D. C., $6,000, 2... months; Blue Ridge Marble Co., Nelson, G... $6,000; six months; Thomas S. Samiland & Co., Dayton, Ohio, $6,000, six months. North Alton, Ill.—Co-operative Granite Co., Indianap... Ind., $5,500, eight months; Bunker ... Marble Granite Works, Bunker Hill, Ill... $5,100; Thomas S. Samiland & Co., Day... Ohio, $5,500, six months; Har- rison G... e Co., New York City, $5,500, five mon... Charles G. Blake & Co., Chi- cago, Ill... 500, six months; Van Amringe Granite ... Boston, Mass., $5,500, six months; ... Crawford & Son, Buffalo, N. Y., $5,50... ix months; M. J. Falvey, Wash- ington, D... $5,800, twelve months; Pyle Granite C... Washington, D. C., $5,800, five months; ... Ridge Granite Marble Co., Nel- son, Ga., ...500, five months.

INDUSTRIAL NOTES.

THE FIRM NAME of Wonham & Ma- gor, industrial cars and equipment, has been changed to Wonham, Magor and Sanger and their offices removed to the Hudson Terminal Bldg., 30 Church St., New York.

THE ASH MEADOW WATER CO., Rhyo- lite, Nev., has awarded contract to the Na- tional Wood Pipe Co., Los Angeles, for 20,- 000 ft. of 6-in. 200 ft. head, machine banded wood pipe.

J. N. H. CORNELL & CO., Engineers and Contractors, announce their removal on March 15 next, to new offices, at 60 Wall St., New York.

THE MISSOURI VALLEY MILLING CO., Mandan, N. Dak., has given contract to the Minneapolis Steel & Machinery Co. for fur- nishing and installing the complete power plant for the new mill they are building at Dickinson, N. Dak. The contract includes one 12 and 26 x 30" heavy duty cross-com- pound Twin City Corliss engine, evaporative surface condenser, 300-HP. feed water heater and purifier, boiler feed pump, pumps for fire service, 50-KW. D. C. generator, switch- board and motor, one 5,000-gallon wooden water tank, oil and steam separators, mis- cellaneous transmission machinery, and all piping, valves and fittings.

AT THE ENGINEERING EXHIBIT held March 15th to 20th, at the Coli- seum in Chicago, the G. Drouve Co., Bridgeport, Conn., showed their "Anti- Pluvius" Puttyless Skylight and the Lovell Window Operator in Space No. 83, north east corner of the building. The "Anti-Pluvius" puttyless skylight has been furnished for a number of the well-known buildings that have recently been built or are now build- ing, namely the Fifth Avenue Office Bldg., New York, Central Railroad of New Jersey Ferry Terminal, New York; Chicago City Railway carhouses, new Lackawanna termi- nal at Scranton, the new Blake & Johnson Co. plant at Waterbury, Conn., etc. The Lovell window operator has been specified and used in connection with extensions and im- provements made to plants in various parts of the country. The company was repre- sented by members of their staff from Bridgeport and Chicago offices.

THE GENERAL ADOPTION of producer gas in Mexican mining operations is well illustrated by the plant of the Capuzayn Mining Co., Parral, Mexico. Here a 300-HP. Westinghouse gas engine generating unit was put in operation in February of the present year, operating on power gas generated from charcoal. This plant was installed to serve a large group of mining properties at Par- ral. This company had a Westinghouse en- gine of the same size and design in opera- tion for about a year. The National Iron & Steel Co., Mexico City, has also operated a producer gas engine plant for light and power service, and the Cia Industrial Jab- onera at Laguna, Mexico, installed a similar plant in 1906. Another important plant in Mexican territory may be mentioned, that of the Potosina Electric Co., San Luis Po- tosi, Mexico. This was one of the earliest and the largest installations in this part of the country, the first engines being installed in 1902. Another is that of the Empress Electricita Duraguena, Durango, Mexico, in whose plant is installed 320 HP. in suction producers.

THE DU BOIS IRON WORKS, DuBois, Pa., manufacturers of "DuBois" gas engines and steam and power pumps, have been awarded the contract for the complete equip- ment and installation of pumping station for the Clarion Water Works, Clarion, Pa., the machinery purchased consisting of one 150- HP. "DuBois" tandem natural gas engine geared to a million-gallon pump. Also one 50-HP. unit for driving air compressor, one centrifugal pump, together with all neces- sary fittings, etc. The plant is installed as an auxiliary to the present steam pumping equipment, which will eventually be replaced by a duplicate of the new gas engine driven unit. The engines and pumps will work against a head of 685 feet, pumping through 4,000 feet of 10-inch main to the stand pipe. A complete new power station is being erect- ed and the plant when finished will be one of the most efficient and modern of its kind in the country. The DuBois Iron Works have also been awarded contract for a 160-HP. twin tandem gas engine, direct connected to 100-KW. generator, for the lighting plant of the 74th Regiment State Armory Building at Buffalo, N. Y.

THE OTTUMWA BRIDGE CO., of Ottum- wa, Ia., has just completed one of the largest highway bridges in Texas, over the Brazos River at Rosenberg. The bridge consists of one 266-ft. chanel span, two 150- ft. end spans, 60 ft. of steel approach, and 6,000 yds. of earth embankment with two massive reinforced concrete abutment walls. The entire bridge is of steel and concrete except the floor plank, having a steel floor system and metal hand rail. The roadway is 18 ft. in the clear, and it is designed to carry the heaviest traffic. About 500,000 lbs. of steel entered into this structure, and the cost was $30,000. This bridge is the highest bridge by many feet of any on the Brazos River, it being 60 ft. clear from low water to the lowest point on the channel span, and about 104 ft. from low water to the top of the highest point on the channel span. This was required by the United States Government with a view to making the Brazos River navigable. The United States Engineers gave the alternative of either placing the bridge at this height or putting in a draw, and the county preferred the former. The main tubular piers are 77 ft. high, built of massive steel tubes 7 ft. in diameter filled with concrete. The bridge was designed, fabricated and constructed by the Ottumwa Bridge Co., of Ottumwa, Ia., E. P. Alsbury & Son, Agts., Houston, Tex.

ACCORDING TO THE NEW YORK "PRESS," President W. C. Brown of the New York Central lines gave out the de- tails on March 5 of an $8,000,000 order for cars and locomotives. Orders have been placed or will be placed for 71 locomotives, 203 passenger cars and 5,450 freight cars. Con- tracts already have been awarded for 3,350 freight cars, distributed as follows: New York Central R. R., 1,000 self-clearing steel hopper cars, to the Standard Steel Car Co.; 1,000 standard box cars, to the Merchants' Dispatch Co.; 200 stock cars, to Haskell & Barker, and 150 flat cars, to the New York Central's shops at West Albany, N. Y. Lake Shore—1,000 self-clearing steel hoppers, to the American Car & Foundry Co. Bids are being received for the remainder of the freight equipment, and orders will probably be placed within a few days, as follows: One thousand box cars for the Lake Shore, 1,000 box cars for the Michigan Central and 100 flat cars for the New York Central. Contracts have already been made for 135 passenger cars, as follows: New York Cen- tral—50 standard 70-ft. coaches and two vestibule smokers, to the American Car & Foundry Co.; three dining cars, seven steel buffet cars and eleven steel postal cars, to the Pullman Co., and ten milk cars, to the New York Central's West Albany shops. Lake Shore—20 standard 70-ft. coaches, to the Pullman Co., and five to Barney & Smith, and one dining car, two steel buffet cars and three steel postal cars to the Pull- man Co. Michigan Central—11 standard 70- ft. coaches, to Barney & Smith, and one dining car and two steel buffet cars to the Pullman Co. "Big Four"—One dining car to the Pullman Co. Rutland Railroad—Six milk cars to Osgood, Bradley & Co. The cars still to be contracted for are as fol- lows: New York Central—36 steel baggage and express cars. Lake Shore—Two cafe coaches. Michigan Central—Three coaches with smoking compartments, two combina- tion coach and baggage, 10 steel baggage and express, two combination baggage and mail and two combination baggage, mail and express cars. 'Big Four"—Three combina- tion coach and baggage, five steel baggage and express and three combination baggage and mail cars. The 71 locomotives will be distributed as follows: Lake Shore, 20 freight; Michigan Central, 18 freight, 12 passenger, fifteen switch and one decapod; 'Big Four," five passenger locomotives.

MR. JAMES L. ELWELL, formerly with R. G. Dun & Co., the mercantile agency, after an association of a quarter of a cen- tury in every capacity from reporter up, severs his connection with the agency and joins the National Association of Manufac- turers, to continue the work of building up on broad lines the foreign business of Ameri- can manufacturers. Mr. Elwell will give special attention to developing the export journal, and will also assist in extending the system of clearing foreign credit infor- mation already established by the associa- tion. The methods of credit reporting have not kept pace with the advance in commerce on other lines, and the association is now making great additions to this branch of their important service. Aggressive methods will be employed to expand the sale of American goods in foreign markets. An ex- port paper will be published and will be printed in both English and Spanish. It will be circulated among the actual buyers, known to the large membership of the asso- ciation in every quarter of the globe.

TRADE PUBLICATIONS.

MECHANICAL WATER FILTERS.—Hunger- ford & Terry, Pennsylvania Building, Philadelphia, Pa. Paper; 5 x 7 ins.; pp. 32; illustrated.

Gravity and pressure filters, iron removal and water softening plants are taken up in this catalog.

HYDRAULIC TURBINES.—Dayton Globe Iron Works Co., Dayton, Ohio. Catalog R. Paper; 6 x 9 ins.; pp. 80; illus- trated.

The design of a hydraulic turbine known as the "New American" is pictured here. Numerous installations under various con- ditions are shown. There are printed also tables of HP. r.p.m. and cu. ft. for various wheel diameters and heads.

ELECTRICITY IN THE LUMBER INDUS- TRY.—General Electric Co., Bulletin 4041. Paper; 8 x 10½ ins.; pp. 12; il- lustrated.

This discusses the advantages to be de- rived by the use of electricity in the lum- ber and woodworking industries. The rela- tive merits of alternating and direct current are briefly stated and a description is given of the plant of the Great Southern Lumber Company at Bogalusa, La.

WATER SOFTENING.—L. M. Booth Co., 136 Liberty St., New York. Stiff paper; 6 x 9 ins.; pp. 15; illustrated.

Water softening in theory and practice is here briefly treated, the practical operations relating, of course, to the form of apparatus installed by the company named. Soda ash and lime were used for treatment. The equipment includes a chemical feed supply and regulating apparatus. A few well chosen and executed illustrations are included.

IRON BOOK STACKS.—The Snead & Co. Iron Works, Jersey City, N. J. Boards; 9⅛ x 12¼ ins.; pp. 160; illustrated.

This book is a large and remarkably well executed description of the skeleton iron book-stacks invented by Mr. Bernard R. Green, the superintendent of the Library of Congress at Washington. These stacks are now in use in many of the largest libraries of the country, notably in the federal institu- tion over which Mr. Green now has struc- tural control.

BLAST HOLE DRILLERS.—The Cyclone Drill Co., Orrville, O. 6 x 9 ins.; pp. 63, illustrated.

The regular well-boring machine has been improved of late so that it makes an effi- cient tool for boring blast holes. This cat- alog gives accounts of performances, costs and equipments that should interest the man who has much rock excavation to do.

BETTENDORF BEARS.—By Bruce V. Cran- dall. Davenport, Ia.: Bettendorf Axle Co. Boards; 7 x 10¾ ins.; pp. 13; illus- trated.

The Bettendorf Axle Co., of Davenport, Ia., issues a comical little brochure, in which the merits of its pressed steel truck frame are set forth in verse and amusing illustra- tions. The booklet is well gotten up, and will probably find appreciation among some of the youthful attaches of the motive power and machinery departments.

ELECTRIC-MOTOR BRAKES.—Westing- house Electric & Manufacturing Co., Pittsburg. Circular 1158. Paper; 7 x 10 ins.

Brakes for electric motors, requiring quick and accurate stopping, are discussed here. Such service is with rolling and blooming mills, elevators, hoists, cranes, etc. These brakes are built for both alternating and direct-current motors and are operated by electro-magnets which are connected in shunt or series with the main motor circuit, as the service may require.

ELECTRICALLY-OPERATED VALVES.— Chapman Valve Mfg. Co., Indian Or- chard, Mass. Bulletin I. Paper; 6 x 9 ins.; pp. 26; illustrated.

A line of electrically-operated valves for a wide variety of work is shown in this bulletin. In addition to the main hand- wheel stem these valves carry a train of motor-driven gearing. There are pictured valves for steam and exhaust mains in steam power plants, penstock gates for hydro-elec- tric work, remote-control mechanism for municipal fire and water-supply lines. By allowing certain lost motion between the main-stem nut and the gate proper the mo- tors start the gear train first and the gate is lifted with a jerk from its seat.

For other Proposal Advertisements see pages 43, 44, 46, 48, of Advertise- ments and Construction News page 90.

BRIDGE SUBSTRUCTURE.

THE SANITARY DISTRICT OF CHICAGO.

TO CONTRACTORS.

Sealed proposals addressed to the Board of Trustees of the Sanitary District of Chicago and endorsed "Proposals for the Substructure of the C., M. & St. P. Ry. Bridge," will be received by the Clerk of the said Sanitary District at the offices of the said District, on the fif- teenth floor of the American Trust Build- ing, Chicago, Illinois, until 12 M., Stand- ard time, on Wednesday, March 31, 1909, and will be publicly opened by the Board of Trustees at a meeting to be held on that day, or the first meeting thereafter.

The work for which said tenders are invited, consists of the excavation for and the construction of the substructure for a railroad bridge at the crossing of the Chicago, Milwaukee and St. Paul Railway over the North Shore Channel of the Sanitary District of Chicago, near Chancellor Street in the City of Evans- ton, County of Cook, State of Illinois. Said work is to be completed on or be- fore July 1, 1909.

The said work is to be performed in accordance with plans, specifications and contract furnished by The Sanitary Dis- trict of Chicago, which plans, specifica- tions and contract may be obtained upon application at the said office of the said District.

Each bid must be accompanied by a certified check or cash to the amount of Eight Hundred ($800.00) Dollars. All certified checks must be drawn on some responsible bank doing business in the City of Chicago, and shall be made pay- able to the Clerk of The Sanitary Dis- trict of Chicago. Said amount of Eight Hundred ($800.00) Dollars, deposited with bids, shall be held by the Sanitary District until all of the respective bids for said structure have been canvassed and the contract awarded and signed. The return of said check or cash to the bidder to whom said work shall have been awarded will be conditioned upon his appearing within ten (10) days af-

ter receiving notice of such award, with bondsmen, and executing a contract with the Sanitary District for the work so awarded, and giving a bond, satisfactory to the Board of Trustees, for the fulfillment of said contract in the amount of Ten Thousand ($10,000.00) Dollars.

All bids must be upon blank forms furnished by the Sanitary District.

Bidders are required to state in their bids their individual names and places of business in full.

The said Board of Trustees reserves the right to reject any and all bids.

THE SANITARY DISTRICT OF CHICAGO,
By ROBERT R. McCORMICK,
President of Its Board of Trustees.
Attest:
I. J. BRYAN,
Clerk.
Chicago, March 18, 1909.

WATER PIPE AND MATERIAL.

Cheyenne, Wyoming.

Sealed proposals, endorsed "Proposals for Water Pipe and Material," will be received at the office of J. D. Wright, City Clerk, of the City of Cheyenne, Wyoming, until two o'clock p. m., Monday, April 5, 1909, for material approximately as follows:

10,027 tons of hub and spigot cast iron pipe, ranging in size from 16 inches to 30 inches, together with all necessary valves and fittings for connecting same.

200 tons of soft pig lead.

15 tons of jute oakum.

All bids must be made on blank forms to be obtained of the City Engineer, and each bid must be accompanied by a certified check or cash equal to at least five per cent. of the total amount of the bid.

Specifications may be examined and detail information obtained at the office of C. C. Carlisle, City Engineer, Cheyenne, Wyoming.

Bidders are requested to have a representative present at opening of bids at above time.

The City of Cheyenne reserves the right to reject any and all bids or to accept any part of a bid.

J. D. WRIGHT,
City Clerk.

STREET PAVING.

Newburgh, N. Y.

Sealed proposals will be received at office of City Clerk in City Hall, Newburgh, N. Y., until 5 o'clock p. m., Thursday, April 1, 1909, for furnishing all materials and paving with granite block pavement on a concrete foundation that portion of Water Street in said city, from the West Shore R. R. Station to Renwick Street.

There is about 8,900 sq. yds. to be paved, curbstones to be set, catch basins, etc., to be built.

Cash or a certified check for $500 must accompany each bid.

Specifications and forms of proposals will be furnished upon personal application, and plans may be seen at the office of the City Engineer, City Hall, on and after March 19, 1909.

The City Council hereby reserves the right to reject any or all proposals received.

D. J. COUTANT,
City Clerk.
WM. J. BLAKE, JR.,
City Engineer.
Newburgh, N. Y., March 16, 1909.

MACADAM ROADS.

Decatur, Ala., March 12, 1909.

Bids will be received by the Court of County Commissioners of Morgan County, Ala., at their office in the Court House at Decatur, Alabama, until 10 a. m., Monday, April 12th, for 27½ miles of macadamized roads, approximate quantities as follows:

Earth excavation, 66,641 cubic yards.

Rock culverts (dry masonry), 1,050 cubic yards.

Crushed stone, 41,076 cubic yards.

Plans, profiles and specifications can be obtained at office of County Engineer, Decatur, Ala.

The right is reserved to reject any or all bids.

BULLEN & BOYD,
Engineers.

TREASURY DEPARTMENT, Office of the Supervising Architect, Washington, D. C., March 15, 1909.—Sealed proposals will be received at this office until 3 o'clock p. m., on the 20th day of April, 1909, and then opened, for the construction complete of the United States Post-Office at Kearney, Neb., in accordance with the drawings and specification, copies of which may be had at this office, or at the office of the Postmaster at Kearney, Neb., at the discretion of the Supervising Architect. J. K. TAYLOR.

Situations Wanted

Mechanical and Electrical Engineers.

MECHANICAL ENGINEER, 15 years' practice, designing, estimating and managing construction of heating and ventilating apparatus and steam power plants. Capable of assuming full charge of department from design to completed work. Best references. Address "Z. A. 11," Engineering News, New York. 11-1t

Civil Engineers.

CIVIL ENGINEER (25), technical graduate, desires position with contractor in New York City; four years municipal and structural work. Address "O. B. 11," Engineering News, New York. 11-12t

CIVIL ENGINEER, 8 years' experience general engineering, surveys and construction; railroad work, is open for an engagement. Address "D. B. 11," Engineering News, New York. 11-1t

Surveyors.

INSTRUMENTMAN, technical, three years general construction and inspection. Fair knowledge steel and reinforced concrete. Go anywhere. Address "E. B. 11," Engineering News, N. Y. 11-2t

CHIEF OF PARTY or transitman, 8 years' experience on general engineering, surveys, construction, municipal and railroad work. Good draftsman. Address "M. 9," Engineering News, New York. 11-2t

POSITION AS RODMAN or chainman. Some experience running transit; knowledge trigonometry, and understand plotting. Location and salary secondary. Address "X. A. 11," Engineering News, New York. 11-1t

YOUNG MAN desires position as instrumentman; university graduate; over two years' experience on railroad and construction work; can take charge of party; satisfactory references. Address "H. 11," Engineering News, New York. 11-1t

Draftsmen.

WANTED—By lady, position as draftsman in engineer's office; salary moderate. Address "F. A. 6," Engineering News, New York. 11-1t

DRAFTSMAN and surveyor for landscape architects or in any civil engineering office or field, desires position. Experience. Address "L. B. 11," Engineering News, New York. 11-1t

Superintendents, Misc., etc.

YOUNG MAN, advanced student, wishes position with surveyor or engineer company; not particular as to location. Address "H. A. 11," Engineering News, New York. 11-1t

DREDGING SUPERINTENDENT (37), 12 years' experience in charge canal, harbor and river contracts, office and repairs; also designer and draftsman; best references. Address "W. 9," Engineering News, New York. 11-4t

SUPT. OF CONSTRUCTION; man of broad experience on all classes of heavy construction, carpenter, millwright and steel work, coal handling, stone crusher, sugar mill machinery and all kinds of conveying machinery a specialty; age 38 years. Address "W. 5," Engineering News, New York. 11-2t

MECHANICAL SUPERINTENDENT, master mechanic or supt. of power plant; assume full charge of power plant, manufacturing machinery, buildings, etc.; capable of taking a load off manager's shoulders; first-class mechanical engineer, experienced; good education; will consider other mechanical, executive or confidential position; willing to travel; no salesman; position wanted. Address "R. A. 11," Engineering News, New York. 11-4t

SUPT. or GEN'L FOREMAN (38), with ten years' practical experience on R. R. and canal construction, power plants, steam shovel, Lidgerwood-Page excavators, heavy concrete work, stone crushing plants, at present on barge canal work, available April 1. Address "A. A. 11," Engineering News, New York. 11-1t

WANTED—Position with some engineer or contractor in the West; have had practical experience of 8 years, 3 of which has been in R. R. reconstruction as engineer and draftsman; can report at once; references. Address "O. A. 11," Engineering News, New York. 11-1t

MANUFACTURING or operating position desired. Record, machinists' trade. Mass. Inst. Tech. (1901). Labor foreman shipyard. Foreman structural shop. Constructing engineer on five manufacturing plants and one bridge. Operated three for short times in starting. Inspected bridge work, tank work, machinery, etc., for eight months. Superintended chemical manufacturing plant. Estimated structural work. Manager for building plant. At present resident engineer concrete dock. Address "C. B. 11," Engineering News, New York. 11-12t

TURBINE-DESIGNER (28 years old) wants situation; thoroughly experienced in modern design of water wheels; familiar with European practice; also experienced in planning water power plants. Address "K. B. 11," Engineering News, New York. 11-1t

WATER-POWER SPECIALIST (28 years old), wants situation, thoroughly experienced in planning water-power plants; also experienced in turbine design. Address "I. B., 11," Engineering News, New York. 11-1t

Situations Open

WANTED—Draftsman; must be neat and rapid tracer and good letterer. Wages $65 per month. State experience and submit samples. Address "G. B. 11," Engineering News, New York. 11-1t

EXPERIENCED structural draftsman wanted. College graduate. Good opportunity for advancement. SYRACUSE BRIDGE CO., 26 Cortlandt St., New York. 11-1t

WANTED—Structural draftsman for building work. Apply HAYS FOUNDRY & IRON WORKS, Newark, N. J. 11-1t

STENOGRAPHER and bookkeeper wanted by New York building contractor. Preference given to young man with previous experience. Give fullest details, including salary expected. Address "B. A. 11," Engineering News, New York. 11-1t

MANAGER WANTED—Exceptional opportunity; good salary, with advances when warranted. Large engineering-construction company desires to employ man of highest capacity to have general charge of its business-getting department. Must be good negotiator and organizer. Abundant initiative and energy; demonstrated executive ability; clear foresight; good appearance and address; ability to speak and write concise attractive English are essential. Experience preferred; either thorough engineering education supplemented by broad business experience, or legal training and experience coupled with natural liking for business and for engineering affairs. In answering, please include age, full details of education and experience, and all other information having a bearing on qualifications and fitness for the position. All communications will be treated as strictly confidential. Address "P. B. 11," Engineering News, New York. 11-2t

WANTED—Works manager, age between 30 and 35, college graduate; must be up-to-date, familiar with bonus system and structural and machine shop operations; also must be ambitious and energetic. The position has a promising future. Address "R. B. 11," Engineering News, New York. 11-1t

Miscellaneous Wants

ROOF ARCHES designed by E. R. T. BERGGREN, 520 W. 162d St., New York. 11-3t

Party with Complete

Steam Shovel Plant

wishes to associate himself with an engineer who is in a position to secure contract for same. Address "Z. 6," Engineering News, New York. 11-4t

Partner Wanted

to help exploit, construct and sell air ships under my patent 909,681, issued to me Jan. 12, 1909. It is to be entirely of metal. May be made to carry any number of persons. Address "C. 11," c/o Engineering News, New York. 11-2t

WANTED

One second-hand, three-quarter yard

Dipper Dredge

complete. W. D. LOVELL, Minneapolis, Minn. 11-1t

FOR SALE

FOR SA

Dredging Plant

10 inch Pump, directly nected compound engines, spud ines, cutter engines, electric light pl 0 pontoons and pipe line for 1,00 discharge, large lighter and wate rge. Price, $13,000, if taken at once.

Address W. A. 11, En ring News, New York. 11-tf

FOR SALE

3 Sea Going Station Hopper Dredges

Capable of dumping at s pumping ashore without alter 500 cu. yds. hopper cap each. Built of iron and in fir ss condition; fully equipped w modern machinery, electric lightin te. Address C. L. CRA LL, 307 Trust Bldg. Galves , Texas 11-4t

FOR SALE.

Engineer's Transit

Hobby maker, 10-inch telescope with vertical circle, level on telescope, clamp and tangent double vernier on limb. Recently completely refitted by Gurley and in perfect order. Price, $100.00.

MRS. L. H. IRELAND
11-1t 130 Liberty St., Binghamton, N. Y.

FOR SALE.

Transactions Am. Soc. C. E.

July, 1889, through 1903; also History of A. M. Soc. C. E., by Charles Warren Hunt (new). Will be disposed of at a reasonable figure. Address MRS. N. S. LATHAM, 102 Pierpont St., Brooklyn, N. Y. 11-1t

FOR SALE.

National Belt Grader

used only 5 weeks. For further information inquire "W. R. & V.," 279 South Ave., Rochester, N. Y. 11-1t

Equipment For Sale Cheap

Eleven 1½, Four 1½ yard Western, 24 inch gage Dump Cars, rebuilt.
No. 10 Western Rock Crusher Outfit, mounted on wheels, with 20 ft. elevator.
18 HP. Ajax Boiler and Engine, on wheels.
60 HP. Mertes Gas Engine, fine condition.
C 32 Ingersoll Rock Drill Outfit.

HOMER BOWES,
11-1t River Ave., Pittsburgh, Pa.

Dump Cars

18—1½ yd. one way dump wooden box and frame cars. In good condition; $20.00 each. F. O. B. Long Island City. About 5 tons 20-lb. relaying rails. Address

PEACE BROS.,
11-4t 20 Main St., Flushing.

FOR SALE.

Buff Engineer's Wye Level

18" telescope inverting eye piece. New. $75.00 cash. Address "M. B. 11," Engineering News, New York. 11-1t

FOR SALE.

Second Hand Brandis Transit

A1 condition. Address "F. B. 11," Engineering News, New York. 11-1t

Road Preservation and Dust Prevention
By W. P. JUDSON, M. Am. Soc. C.E.
A book for every engineer. Gives costs, methods and results.
Price, $1.50 net
ENGINEERING NEWS
220 Broadway New York